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CLINICAL LECTURE.

URETHRAL FEVER.

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(Reported by William Whitford, M.D.)

Gentlemen: The greatest discrepancy exists in the statements of various authorities with regard to the pathology of the polymorphous disease known by the various terms of "urethral, urinary, and urine fever." This I firmly believe to be due to the fact that these terms are applied in a haphazard manner to several distinct types of disease consequent upon diseases of, and operations upon, the genito-urinary apparatus; and I am positive that a careful survey of the clinical evidence upon the subject will bear me out in my opinion. Urethral fever, as the term is ordinarily used, is, so to speak, an omnibus which comprises a series of widely-varying phenomena following chronic disease or accidental or surgical trauma of the genito-urinary tract. Fallacious as the nomenclature of these phenomena may seem to be, we are compelled to select some term by which they may be recognized. The term "urine fever," as suggested by Reginald Harrison, is, perhaps, the most accurate. Unfortunately, however, even this term is suggestive only of one element which may act as a causal factor in the production of the morbid phenomena which we are about to consider. Harrison has adopted this term because of his opinion that the so-called urethral fever is invariably due to morbid changes in the urine at the site of injury, these morbid changes giving rise to the development of toxic materials, which, when absorbed into the circulation, are always inimical to health and often productive of a fatal result. Whatever the cause or causes of urethral fever—and this we will consider later on—the subject is one of the greatest practical importance to the surgeon, for the various phases of this disease constitute the principal danger of operations or injuries upon the urethra, prostate, and bladder.

From a clinical standpoint, I believe that we are warranted in dividing urethral fever into six forms, these forms, however, being capable of demonstration only in typical cases in each instance. They may merge one into the other, and are all secondary to genito-urinary operations, chronic disease, or injury.

1. This first form, which is by far the simplest, consists of a nervous rigor, which is not succeeded by fever, and which follows, within a comparatively short time, operations or injury. This nervous disturbance is, in all probability, due to slight surgical shock, with a resulting vaso-motor disturbance of the peripheral circulation.

2. Traumatic or surgical fever, due to the same causes, and dependent upon excessive reaction from surgical shock. This form of fever is quite apt to be modified by a varying degree of septic infection.

3. Toxicæmia following severe shock, with a resultant perverted elaboration of the urinary secretion and the formation of organic poisons similar to the vegetable alkaloids. Associated with this we have reflex inhibition of the functions of the kidney with its attendant uræmia. This we

may term the typical form of urethral fever. It is sometimes complicated by convulsions.

4. Classical septæmia, which may prove fatal within a short time, or may merge into the pyogenic form of septæmia (pyæmia), with its characteristic circumscribed and diffuse suppurations in the various organs and tissues of the body.

5. Chronic urinary fever attendant upon obstructive diseases of the urinary organs.

6. Cases of a mixed type, which combine in varying degrees elements of the first four forms of the disease.

If the above classification is correct, there is little wonder that the opinions of various authorities in regard to the pathology of urethral fever vary so widely. There must be some explanation for the fact that one authority claims that these varying phenomena are invariably septic; another, that they are due to ammoniacal decomposition of urine and subsequent absorption of the product; another, that they are due to simple uræmia; and last, but not least—and of this theory Reginald Harrison is the principal exponent—that they are due to obscure changes in the urinary secretion, and the formation of new, and as yet unisolated, toxic compounds. It is evident to every practical surgeon that none of these causes is sufficient to explain all of the cases of so-called urethral fever. Simple absorption of healthy urine certainly will not cause the disease, nor, as has been shown by Dr. Keyes, will it produce even simple suppuration when introduced into the cellular tissue by hypodermic injection. We do know, however, that urine in a state of decomposition is possessed of most powerful propensities for evil; in fact, there is hardly any organic substance with which I am acquainted that is so inimical to the vitality of cellular tissue. The experience of our best surgeons in cases of urinary extravasation will bear me out in this assertion. Now, there is a close resemblance between the effects of extravasation of decomposing urine and those of the poisons of erysipelas, of dissecting wounds, or even the bite of venomous reptiles, as far as their effects upon the vitality of connective tissue are concerned. It is obvious to anyone, who stops to consider for a moment, that there must necessarily be, in all cases of injury or operations upon the urinary organs, pronounced danger of septic infection. The injury, or the site of the injury, is usually such that free drainage is impossible. Decomposing urine is usually present, and is productive of more or less death to connective and cellular tissue, and there are always present the conditions of heat and moisture. Such an environment, as you doubtless are well aware, is peculiarly favorable to the development of those minute organisms upon which septicæmia is supposed to depend.

None of the explanations which have been given will, when taken alone, explain the fatal result which has been known to occur from the simple introduction of a smooth staff into the urethra.

There is also food for reflection in the fact that a single straight cut in the urethra—as, for instance, internal urethrotomy—is productive of less shock in many cases than is repeated stretching of the sensitive structures of the stricture by a sound or bougie. It is well known that an irritable, sensitive, and contractured tissue is much more safely and comfortably dealt with in any situation by a complete division than by attempts at stretching.

The cure of stricture by gradual dilatation is dependent upon (1) mere mechanical distension; (2) upon reactionary hyperæmia, with increased tissue-change at the site of the organic deposit. The functions of the lymphatics and veins are increased in activity, and absorption takes place very rapidly. It would appear, then, that if the tissue is extraordinarily sensitive, as is frequently the case in organic stricture, and if there are present toxic principles from decomposing urine, or ordinary septic materials at the site of the stricture or behind it, the operation of dilatation must necessarily be followed by a degree of nervous shock dependent upon the susceptibility of the individual and by a varying degree of absorption of noxious materials. The lymphatics and veins, unfortunately, have not the power of discriminating between the organic substances which are obnoxious to the welfare of the individual and those which can be disposed of in a physiological manner without injury to the blood or tissues, and they, therefore, take up the poisonous materials simultaneously with the products of retrograde tissue-change.

The relation of organic and functional disturbance of the kidneys to urethral fever is a most intimate one. There is probably no case of obstructive disease of the genito-urinary tract, of long standing, which is unaccompanied by functional disturbance of the kidneys, and, in a large proportion of cases, there occurs, later on, actual organic change in the renal tissues. This condition of affairs is to be anticipated and given serious consideration in every case of

chronic urinary disease. The immediate effects of the kidney-difficulty may not be marked, because of the activity of vicarious elimination by the skin and bowels, this vicarious action of these structures constituting the means by which the system accommodates itself to the imperfect elimination of the constituents of the urine. There are few, very few, persons, even among those who term themselves healthy, in whom the bodily sewage is absolutely perfect, and it is obvious that, when the kidneys perform their functions imperfectly, this condition of imperfect sewage becomes one of vital importance. When, as a consequence of operations upon the genito-urinary organs, surgical shock is produced, reflex hyperæmia of the renal tissue is quite apt to result. This produces a strain upon the kidney, which, in its impaired condition, it is unable to withstand, and as a consequence its functions are completely inhibited, with resultant uræmia.

The subject of autogenesis, in its relations to the development of certain constitutional diseases, demands more attention than is usually accorded it, and it is probable that researches in this direction, of a physio-chemical character, will, in the future, shed new light upon many diseases, the etiology of which is now obscure. Among the modern writers who have given considerable attention to the morbid results of perverted physiological chemistry, Benjamin Ward Richardson is perhaps the most prominent. It is to the researches of this author that we are indebted for the most widely accepted theory of the pathology of rheumatism. It is probable that perverted tissue-metabolism bears a causal relation to the typical cases of urethral fever. This perverted tissue-metabolism may quite readily be brought about by surgical shock. We know quite well that mental emotions of various kinds, and those impressions upon the nervous system which result in the condition that we term "shock," may produce marked changes in the physiological secretions of the body, these changes consisting either in an increased or diminished flow, or of obscure chemical changes of composition; thus we may have, through various nervous impressions, an increase or decrease in the quantity of the saliva, the lacteal secretion, the gastro-intestinal secretions, the urine, and of the menstrual flow.

A familiar illustration of the chemical effect of various emotions upon physiological secretions is the change in the quality of the lacteal secretion, induced by fright, anger, or grief. This change, although incapable of demonstration by microscopical or chemical research, is most pronounced in its morbid effects upon the child, cholera infantum of a most fatal character being a frequent sequel to the emotions of anger in the mother. Precisely what this change in chemical composition may be, is an open question; but it is possibly a species of decomposition which results in the formation of a poison analagous to the "tyro-toxicon" discovered by Prof. Vaughan in impure cow's-milk. It is well known that great care is necessary on the part of those who supply milk for the use of infants, to prevent fatigue and various sources of excitement in the cows. It is well known, too, that sexual excitement in a cow is productive of marked changes in the milk, and renders it unfit for human food. If these changes occur in one secretion, it is highly probable that all of the physiological secretions are susceptible to them. It is probably true, in the case of the saliva, that the emotion of anger causes the development of toxic principles in that secretion, and this may possibly explain the serious results that are so apt to ensue from the bite of an enraged human being. In the case of the urine, the influence of surgical shock may be inferred to consist in the development of organic poisons in that secretion. This, according to Reginald Harrison, may be considered to be hypothetically analagous to the ptomaines and leucomaines discovered by Selmi and Gautier, in both dead and living bodies, and which so closely resemble the vegetable alkaloids, particularly nicotine, brucine, and strychnine. The toxicæmia resulting from such changes would explain the otherwise obscure and mysterious cases of death following the simple introduction of a sound. In some cases the development of uræmia or toxicæmia is very gradual, and results from successive operations upon the urethra. The poisonous materials may accumulate in the system for some time and their presence fail to manifest itself until the system is, so to speak, ready for the explosion, when a previously tolerated and comparatively slight irritation of the genito-urinary apparatus will be sufficient to develop a serious result.

A competent surgeon, and one of my personal friends, had performed urethrotomy upon an apparently healthy young man of 28 years of age. The stricture was located about three-quarters of an inch posterior to the meatus, and was divided under cocaine without any difficulty or pain whatever.

A sound was passed every second day thereafter, each operation being preceded by the injection of a four per centum solution of the muriate of cocaine, the quantity used being about two fluiddrachms. About a week after the urethrotomy, the patient complained of considerable nervousness and insomnia; but this was not considered of any particular importance. On the ninth day, an attempt was made to perform the usual operation of sounding and injection of cocaine, the patient meanwhile lying upon an ordinary surgical chair. The doctor left the patient for a moment, to obtain his sound and to give the cocaine an opportunity to affect the urethra. He was called back in about a minute by the patient, who complained of dizziness, and immediately fell back on the chair in convulsions. Assistance was called, stimulants were given, and the galvanic current used, but without avail, the patient dying in something less than five minutes. At the post-mortem, a thorough examination of all the vital organs was made, but everything was found perfectly healthy, with the exception of the kidneys, which were so extremely congested that they presented a bluish appearance similar to that of the spleen. This fatal result was surely not attributable to the cocaine, but was evidently due to the sudden explosion of poisonous material which had been gradually accumulating in the system as a consequence of imperfect action of the kidneys, and the metabolic action of slight surgical shock upon the tissues. This condition of toxicæmia gradually grew more pronounced, and finally was so severe that a comparatively slight irritation was sufficient to inaugurate a nervous explosion. Such an irritation was afforded by the mechanical effect of the injection of cocaine, and it is probable that the introduction of simple water would have had a similar effect.

The danger of the development of urethral fever is directly proportionate to the depth of the distance of traumatic and surgical injuries of the urethra from the meatus. Those situated in the pendulous portion of the urethra are not, as a rule, very dangerous as compared with those situated in the fixed or deep portion of the canal. The explanation of this is very simple, the nerve supply of the deep urethra being much more abundant and sensitive, the cellular tissue more abundant, and the opportunities for drainage much less favorable than in the pendulous urethra. Decomposing urine is less apt to remain behind a stricture in the pendulous portion of the canal than in the deep portion, this being due to simple gravity and to the fact that strictures of this portion of the canal are usually of large calibre. Urinary extravasation in the pendulous portion of the urethra is not apt to produce serious danger to life, inasmuch as the connective tissue in this situation is very sparse and the extravasated fluid is likely to be detected before it is has burrowed back into the perineum.

The clinical features of urethral fever in its various forms require some special consideration. The nervous form of the disease usually appears in patients of an impressionable constitution, or who, in other words, present a decided tendency toward neurotic disturbances. Oftentimes its occurrence may be anticipated by the behavior of the patient while he is under instrumentation. He is quite apt to have nausea, perhaps vomiting, slight rigors, partial or complete orgasm, or more or less complete syncope during the introduction of instruments into the deep urethra. Such patients are apt to develop, as a rule, within twenty-four hours after urethral operations or injuries, a sharp chill. This lasts for a variable time, being rarely prolonged, and then disappears, leaving the patient about as well as before, with the exception perhaps of more or less nervous depression. Rarely, indeed, there may be a slight amount of fever or sweating.

The traumatic form is the most common; it manifests itself by a sharp chill, usually within twenty-four hours after operations or injuries of the genito-urinary tract, and is followed by pronounced fever and sweating. The disturbance either passes off after a single paroxysm, or is followed by a period of general malaise, with perhaps a recurrence of the paroxysms for several days. In these latter cases, there is present in all probability a slightly septic element.

The third form (the typical form of the disease) may or may not be attended by a violent chill coming on within twelve to thirty-six hours. There is marked prostration, violent vomiting and diarrhœa, coldness of the surface of the skin at first, succeeded by more or less febrile elevation of temperature later on if the patient survives, with suppression of urine, merging in a very short time in fatal cases into coma of an apparently uræmic type. I say "apparently uræmic type," because, according to the theory I have advanced regarding the action of shock upon the urine, there is probably in many cases a toxic element present independent of uræmia. Cases of this kind may come on gradually and mani-

fest themselves by a sudden explosion in the form of convulsions, as is illustrated by the fatal case that has just been related to you.

The fourth or septic form of urethral fever manifests itself usually by a slight (but sometimes by a very severe) chill; this is followed by fever of a varying degree of severity. The patient may sink into a typhoid condition, or become comatose, and die within from two to ten days from acute septicæmia, or the condition may be subacute and merge into the pyogenic form of septæmia, known more familiarly as pyæmia, in which event the patient finally succumbs to the slow development of circumscribed or diffuse purulent deposits in the joints, viscera, and other structures of the body.

The fifth form of urine fever may be described as a chronic condition of toxicæmia and nervous irritation produced by long-continued obstructive and inflammatory affections of the genito-urinary tract. This condition of toxicæmia and general nervous irritation is one which is not generally recognized, but which is very important in its relations to chronic genito-urinary disease. It exists in the majority of cases of organic stricture of long standing, in old men suffering with prostatic hypertrophy, in tumors of the bladder, in chronic cystitis from whatever cause it may arise, and in pyelitis, particularly the form due to the presence of nephritic calculi. There is a marked tendency in patients suffering with these affections to a mild form of hectic fever; flushings of the face, with slight elevation of temperature and perhaps followed by a certain degree of perspiration, are quite common; nervous irritability is especially marked. Indeed, there are few diseases which are productive of so much mental depression and of so much irritability of temper as chronic diseases of the genito-urinary tract. The old man with a vesical calculus or prostatic hypertrophy, or, for that matter, the young man with a stricture, is apt to be unreasonably morose and irritable. In all of these cases, there are apt to be present more or less obscure rheumatic or neuralgic pains in various situations. After prolonged retention of urine from any cause whatever, you will find that the majority of patients will suffer for a few days or weeks from more or less marked elevation of temperature These different general conditions are due, in my opinion, to toxicæmia which is dependent upon (a) imperfect elimination of the products of retrograde tissue-metamorphosis, (b) to a greater or less degree of absorption of morbific materials produced by inflammation and the decomposition of residual urine behind the site of obstruction. You will find that many patients suffering from chronic genito-urinary disease of an obstructive or chronic character fail to realize how sick they are until the diseased condition has been removed, or at least greatly improved. They then find that slight disturbances to which they had paid comparatively little attention, and which they had never dreamed of attributing to their urinary trouble, have disappeared. This is due in a great measure to the fact that reflex nervous irritation has been relieved; but, more than this, it is due to the fact that the constant absorption of poisonous materials from the site of disease or above it no longer occurs.

I have designated a sixth or mixed form of the disease. It is probable that you will meet with comparatively few cases that cannot be assigned to one or the other of the first five forms of the disease that have been described, but occasionally cases will occur in which there are, for example, equally strong evidences of septic disturbance and of uræmia, with possibly a tendency to disturbance of the nervous functions.

The principal measures of treatment of urine fever are of a prophylactic character, for, unfortunately for the patient, the marked forms of the disease are seldom recovered from. The principal feature of prophylaxis should consist of strict attention to those principles laid down in the lecture on "Genito-urinary Hygiene." If the functions of the kidney are stimulated by alkaline diuretics, and the skin and bowels kept in an active condition, thus affording vicarious relief to the kidney, the patient is placed in the best possible condition to avoid those complications which we have described. In addition to these measures, moderate doses of antiseptic drugs may be given internally. Of these, I prefer boracic acid in ten-grain doses, as recommended by that excellent authority, Professor Palmer, of Louisville. Salicylic acid, or preferably the salicylate of soda, is also an admirable remedy. Local antisepsis in cases of chronic bladder and prostatic disease is of course essential, and can be accomplished by irrigation with mild antiseptic lotions, such as carbolic acid, borate of soda or boracic acid, and the bichloride of mercury. You should avoid operating upon cases complicated by structural renal disease if it is possible to do so, and, if an operation is unavoidable, you must be careful in your

manipulations; but you should throw the responsibility of your results entirely upon the patient and his friends. Prior to operative interference, particular attention should be paid to the urine and to local antisepsis. The patient should be put to bed and instructed to remain perfectly quiet; he should be placed upon a milk diet and moderate doses of quinine—5 grains, three times daily, for from a week to ten days previous to the time appointed for the operation, being about the required dose.

Various drugs have been recommended for administration just before or at the time of urinary manipulations or operations. Quinine and morphine in doses of ten grains and one-quarter grain respectively are the most popular remedies, and unquestionably have an excellent effect by increasing the resisting power of the nervous system and thus lessening the liability to shock. Jaborandi is also recommended for the same purpose, and, inasmuch as its physiological action is such that it must necessarily relieve any strain upon the kidney, this drug seems to me to be one of our most philosophical remedies. The muriate of pilocarpine may be given instead of the fluid extract of jaborandi, or the muriate of pilocarpine, in hypodermic doses of a fourth to one-half grain, instead of jaborandi; and, in case uræmia supervenes, this method of administration is absolutely essential.

The milder cases of urine fever (the nervous and traumatic forms) are rarely fatal, but may possibly lead to the severer forms of the disease, and consequently require our attention. The administration of opium and jaborandi, with perhaps (in the traumatic form of the disease) aconite or veratrum viride, constitutes the best measures at our command. In the uræmic form of the disease, our attention should first be directed to the vicarious elimination of urea, for we can waste no time in attempting to restore the functions of the kidney within the first few hours after the supervention of the uræmia, especially if coma has occurred. Pilocarpine will act upon the skin, even when the patient is in a comatose condition, and it should be given freely. The bowels should be moved by croton oil, two or three drops of which, in combination with five or six drops of olive oil, may be placed upon the back of the tongue. If the patient is able to swallow, elaterium in doses of from one-eighth to one-third of a grain is preferable to all other hydragogue cathartics. Hot baths should be given, and dry or wet cups applied over the region of the kidneys. Digitalis may be given internally as a diuretic after the emergency is over, but it would be a waste of time to attempt to accomplish anything by diuretics before vicarious elimination of urea has been attended to.

When the septicæmic or pyæmic form of urine fever develops, very little can be done in the majority of cases beyond supporting the powers of life by free stimulation, a fatal result being almost inevitable. It is, however, in my opinion, our duty to attempt to avert a fatal result by incision and drainage, where possible; and, if the case is clearly septic, a free incision at the site of the stricture, or a perineal cystotomy in cases of bladder and prostatic trouble, constitutes the proper surgical procedure.

The management of cases of chronic urinary fever consists in local antisepsis by irrigation and the removal as soon as possible of the organic condition upon which the gradual and constant septic infection depends.

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COMMUNICATIONS.

SMALL DOSES: THERAPEUTIC CONSIDERATIONS.

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(Continued from page 841.)

Electricity.—Proofs are not wanting that electricity, either in small or large doses, is a paralyzer, although the opponents of this theory insist that, given in medicinal doses, it is a nerve stimulant; but the latter view is based on a "temporary hypothesis," while the former is founded on facts. That there exists a diversity of opinion concerning this valuable agent in the treatment of various disease-conditions may be accounted for on the ground that the theory of the action is too intimately associated in the mind with the theory of the effect. The philosophy connected with the action of electricity is one thing, the physical or molecular changes incident thereto being taken as a cause, while the effect must be looked upon as a separate and distinct condition, representing an entity in itself.

Having arrived at this healthy understanding, we are prepared to estimate the various phenomena manifested by an agent

so universally applied. Taking our cue from Dr. Brunton, who says: "Slight electrical shocks from a coil increase the rapidity of the protoplasmic movements; stronger ones cause tetanic contraction" (*Phar., Ther., and Mat. Med.*, p. 46), which may be accepted as a demonstration of the proposition that electricity is a paralyzer. But, if more evidence were needed, we have it on the following page: "A constant current of electricity causes contraction and imperfect tetanus," referring of course to its action and effect on protoplasm. Now, what is the relation existing between the protoplasm and nerve and muscular tissue? It is well known that in the lower forms of life we are unable to differentiate between the nervous and the muscular tissue, so intimately are the two blended, their inter-relations being mutual; but, as we ascend in the scale, there is found a distinct and important difference, the inter-action and inter-relations of which will be referred to more particularly when I consider the subject of strychnine.

These experiments, along with the investigations of others, furnish sufficient evidence to warrant the following conclusions:

1st. That electricity is not only a protoplasmic poison, but also a paralyzer of nerve-function.

2d. That small doses, mild currents, increase the rapidity of protoplasmic and muscular movements, and

3d. That large doses, powerful currents, lessen the rapidity of protoplasmic and muscular movements, and, continued long enough, produce tetanic rigidity.

4th. That, by paralyzing nerve-function, control or restraining power over muscular irritability is lost in direct ratio to the strength of the electric current.

5th. The action of this agent is, therefore, always the same, only different in degree.

6th. The effect of the electric current depends upon the size of the dose—mild or strong currents—and the muscles supplied by enfeebled nerves, as a rule, will be first to respond to this influence.

The truth of these deductions is forcibly illustrated in the treatment of lumbago by the Faradic current, one of the most efficient remedies we have for this affection. These cases are observed in patients subject to the rheumatic or gouty diathesis, and generally appear shortly, or at times suddenly, after exposure to cold, damp, or inclement weather. A mild current properly applied for the period of from ten to thirty minutes will almost invariably relieve the pain, and frequently a single application will be sufficient. Much will depend on the nutrition of the patient, and whether the attack is acute or of long duration, and strong currents may be used to produce the same effect; but my observations lead me to conclude that the milder currents are to be preferred, as they cause less pain, and there is not the same depression following their application. The same method will be found effective in the treatment of contusions and in other affections of like character, and, while they afford relief and effect a cure, they really do nothing more than anticipate nature in the work. The *modus operandi* will be considered under the head of *remarks*, at the close of this paper, and, taken in connection with the study of strychnine, I trust we shall have a better knowledge of the action and the effects of small doses.

Strychnine.—The investigations of Brunton have shown that, in the experiments to determine the irritability of muscle, there is an interval between the application of the so-called stimulus and the contraction of the muscle, called the latent period. In connection with these observations is the statement, also, that the latent period is shortened by small doses of strychnine, while large doses lengthen it, which accords with the views already advocated in this paper, viz., that the action of a remedy is always the same in health, but the effect is modified by an increase or diminution of the dose. This statement can be misleading only when the circumstances and conditions attending the observation have been modified by influences already noted.

We have here, then, an illustration of an important general principle underlying the application of drugs to determine their physiological action, as well as a delicate indication for the selection of appropriate remedies in the treatment of disease—a principle which will be more fully understood when we consider the action and effects of ergot. But the work of Dr. Brunton does not end here, as he has placed himself on record concerning the manifestations of both nerves and muscles under the influence of various poisons, strychnine included. The action of the latter is admitted to be that of a nerve paralyzer, and when given in sufficient quantity ("action continued long enough") the resultant effect upon nerve and muscle is tetanic convulsions. A quotation will more fully demonstrate the views of our author: "In some cases the nerve is affected so much before the muscles (by poisons)

that at first sight it might appear that the nerve alone was paralyzed, and the muscle left unaffected."[1]

Dr. Brunton is a painstaking and faithful observer, but, by a process of induction not warranted by the facts, his conclusions are sometimes barren of the therapeutic possibilities which ordinarily we are led to anticipate. Thus, he says: "Strychnine stimulates the spinal cord, . . . and, if the action continue long enough, . . . will ultimately cause paralysis of both spinal cord and motor nerves."

From what has been said, we may conclude that strychnine should preferably be given in small doses, the reasons for such a course being easily formulated:

1st. Because it shortens the latent period of muscular irritability, thereby increasing the circulation and improving the nutrition of the tissues.

2d. Because the remedy is more evenly distributed throughout the system, and the muscles supplied by enfeebled nerves, being bathed in the blood containing it in solution, are constantly under its influence.

3d. Because it reduces to a minimum the dangers of tetanic rigidity and convulsions.

As an objection, it may be urged that small doses would scarcely be appreciated, and that they would fail for lack of power to saturate the circulating fluid; but such opposition is refuted by the experiments of Magendie, a detailed account of which will be omitted. It will be sufficient to recall the following facts: when injected into the pleura, the poisonous effects of strychnine were perceived almost immediately, and within twenty seconds when introduced into the peritoneum. Absorption from the mucous surfaces was less rapid, but the effect was the same. The well-known diffusibility of strychnine, 1 part in 1,280,000 parts of water being perceptible to the taste, gives this drug unusually distinctive characters as a subject for study.

As the present paper is mainly intended to call attention to certain general laws, no attempt will be made here to outline a complete working theory, and I may close with some suggestions, therapeutic in character, which are in accord with the views set forth.

Small doses of strychnine have lately been recommended for the relief of insomnia due to exhaustion, a condition often found in those who are engaged in literary work. It is assumed that a person who gets too tired will be unable to sleep, and that, if several small doses of strychnine are taken shortly before bed-hour, this feeling of exhaustion will be relieved and the patient left just tired enough, when Morpheus, the changing god of dreams, will gently lull him to slumber. This method I have found far superior to the use of the bromides or chloral, while its simplicity and practical value commend it to every practitioner. The plan I have adopted is as follows: About half an hour before retiring, let the patient dissolve a tablet containing the one one-hundredth of a grain of the sulphate in six teaspoonfuls of water, directing that a teaspoonful be taken every five minutes until the whole is taken. The results of this treatment will be a great surprise to those who have not considered the matter, and are well calculated to demonstrate the principle for which I would contend. In the treatment of many slight gastric affections, a similar plan will be found equally satisfactory. By "slight gastric affections" are meant those cases in which apparently there is little demand for medication, but still are of such a character that the subjects are necessarily compelled to undergo no little uneasiness, such as slight dyspepsia, and frequently those cases resulting from sympathetic derangements, as in the case of the vomiting of pregnancy. The latter is often very effectively treated by adding, to a glass of water, from ten to twenty drops of nux vomica (tincture), directing that, in the early morning, a teaspoonful be taken every ten minutes for an hour, and, after the first hour, the same dose may be continued at intervals of one or two hours. In the treatment of ordinary simple dyspeptic conditions, such as that just mentioned, a solution of the same strength may be prepared, and the patient directed to take a teaspoonful before and after meals. The same plan is very useful in the case of those suffering from a debilitated condition of the system, and may be advantageously adopted as an adjuvant to other treatment.

REMARKS.—A few words should be added here as to the value of these generalizations, and the bearing which they may have in the elucidation of the theory of the actual value of small doses in the treatment of disease. As to strychnine, for example, its value is well recognized, but the method by which we arrive at results are not so well understood, the deductions of experimental physiologists being somewhat contradictory and misleading. Its application in the cases above mentioned is accounted for on the

[1] *Loc. cit.*, p. 119.

basis of its physio-pathological action, or, to be more plain, its physiological action in the presence of pathological changes, involving, we may presume, certain modifications in the cell-action. Whether the tissues are normal or abnormal, we always have to do with the cell-action, and, when a medicament is added, we have as a resultant the cell-action and the drug-action, and we may assume that, when the latter is properly applied, the drug-action is in the nature of a complementary action to that of the cell. It is certainly not "substitutive" action, nor does the expression "elective action" sufficiently cover the ground, while, in the light of these investigations, both homœopathy and dosimetry are altogether irrelevant expressions. Neither can it be called specific, for but very few remedies are confined to any specific effects, at least not in the treatment of disease. As I do not feel at liberty to decide upon the matter at present, we may conveniently submit the matter to a medical linguist like Dr. Campbell, or a nosographer such as Dr. Gouley.

In closing the discussion, it does not follow that the subject has been exhausted, for only three remedies have been considered, and in a most superficial and hasty manner; but, if what has been said will serve to cast a single additional ray of light upon an intricate and interesting matter of the utmost importance to physicians and to humanity, I shall feel that the task has not been undertaken in vain. I venture the assertion that there is not a remedy in the whole materia medica which is not entitled to a restudy upon the plan which I have somewhat faintly outlined, and doubtless the physician of the future will be able to understand the difference between drug-action and drug-effect; he will be competent to point out where the action ends and when the effect begins. The therapeutist of the future will be he who reads aright the value and the application of small doses, and who, with but few remedies, has learned to know them well. An apt quotation from Dr. Campbell will suffice: "For many an hypothesis supported by the ablest of physicians has disappeared from the pages of our medical books, leaving only a few words, like fossils, to tell future generations the story of their rise and fall."

4719 Frankford Avenue.

—Beginning with the session of 1888-'89, the College of Physicians and Surgeons, New York, will require a three years' course of study from its students.

FOOD AND DYSPEPSIA.[1]

BY GEORGE N. HIGHLEY, M.D.,
CONSHOHOCKEN, PA.

The subject to which I invite your attention for a few minutes is one which I fear the most of you will think somewhat dull, though I doubt if any will deny its importance. Indeed, when one considers the large percentage of people who are sufferers from this malady, either as a complication of other affections or as a disease *per se*, the wonder is that so little attention is given to it.

Dyspepsia is impaired digestion: digestion is a process of solution by hydration. Food necessarily exists in the vegetable world in an insoluble form, otherwise the rains would soon return it to the soil. To convert the insoluble food into a soluble form is the prime object of the digestive process. How is this accomplished? Liebig's division of foods into proteids, carbo-hydrates, and fats seems to be the most natural one, and is the classification most generally accepted at this time.

The food in passing along the alimentary canal comes in contact with the following juices, viz: The saliva, gastric juice, bile, pancreatic juice, and others whose properties are either unimportant or little understood. So far, experimenters have proved almost beyond cavil that the saliva converts the insoluble starch into the soluble grape-sugar; that the gastric juice changes the insoluble proteids into the soluble peptones; that the bile and pancreatic juice render the fatty foods more soluble; and that the pancreatic juice alone is capable of effecting all these changes. However, in order that these changes may be fully and easily accomplished, it is necessary that the food shall have undergone some preliminary treatment, which mainly consists in tissue-disintegration. This is accomplished by cooking and by mastication.

Had civilized man the peptic powers of some of his four-handed cousins—as for instance the Ceboo monkey, which is said to be able to eat its own weight of bananas in the twenty-four hours—he might ingest his food in any manner and quantity he saw fit, without impairing the digestive process. But, while a few seem to be able to digest or void whatever they can ingest, the majority must eat food properly cooked and masticated, or suffer the tortures of

[1] Read before the Montgomery Co., Pa., Medical Society.

indigestion. The part which mastication plays in comminuting the food and mixing it with the saliva is so obvious that mere mention of it is sufficient.

I ask your attention a little more fully to the changes wrought by cooking. First, as to its effect upon farinaceous foods. The starch corpuscle, which is the component part of this class of foods, is made up of an outside envelope, cellulose, and an inner part, granulose. Now, while the salivary secretion is quite active on the granulose, readily converting it into grape-sugar, it is unable to act on the cellulose. Hence the digestion of raw unboiled starch is attended with considerable difficulty. In the process of boiling or cooking, the cellulose coat is ruptured, exposing the granulose, and in this state the saliva has ready access to it. The cooking of animal foods, so as to promote their solubility to the greatest possible degree, requires considerable skill. Bad cooking augments their insolubility rather than their solubility. This will be best understood by observing the effect of ordinary methods of cooking upon the several constituents of meat. A piece of lean meat, as you all know, is composed of albumen, gelatin, and fibrin, closely related in their chemical composition and properties; kreatine and kreatinine, to which the stimulating properties of the meat are due; besides a small quantity of mineral salts, very necessary to tissue-nutrition.

As the white of the egg is a typical example of nearly pure albumen, we may see how it is affected by cooking. If we heat some white of egg in a test-tube into which a thermometer has been previously placed, we will find that, at a temperature of 134° F., white fibers begin to appear within it. These gradually increase until the whole mass becomes solid, which it does at a temperature of 160° F. The albumen thus solidified is tender, delicate, of a jelly-like consistence, and easily digestible. If now we increase the heat up to 212°—the boiling-point of water—keeping it there a short time, the coagulum will become shrunken, hard, and horny. Upon further elevation of temperature, it is converted into a substance so hard and tough that it may be used as a cement.

This simple experiment will show at once the difference between an egg which has been cooked by immersion in boiling water and one cooked at a temperature not exceeding 180° F. Even in the orthodox method of putting the egg into boiling water for three and a half minutes, it will be found that a part of it is quite hard, while other parts are semi-raw and slimy. If the same egg had been put into water at a temperature of about 188°, and allowed to remain ten minutes or more—time not so important, as it will not become hard even in ten hours—it would be found evenly cooked throughout. Practically, this can be done by putting the egg into at least a pint of boiling water, immediately setting it off the fire, and allowing the egg to remain in the water ten minutes.

Gelatin is said to form one-half the whole body, or, more correctly, perhaps, one-half the whole body is convertible by boiling water into gelatin. The tissues thus convertible into gelatin are tendons, sheaths of muscles, etc., and the cell-walls. Gelatin is a semi-solid tasteless substance, readily soluble in water at a slight elevation of temperature. Prolonged boiling and drying convert it into glue. The properties of fibrin, so far as cooking is concerned, are similar to those of albumen and gelatin. It is coagulable like albumen, and soluble like gelatin, though to a less extent. From what has just been said, it is evident that, whatever may be the method of cooking, temperature is an important consideration. A temperature sufficient to convert the albumen, gelatin, and fibrin into their most soluble condition is the desirable point. If this be exceeded, their solubility is lessened rather than augmented.

Retention of natural juices is another important point, not only to promote solubility, but also to preserve its nutritive and sapid qualities. If boiling be the method of cooking, the meat should be immersed at once into boiling water and kept there for a few minutes, or long enough to give it an insoluble coating of coagulated albumen. This will retain the juices, after which the cooking may be continued at a lower temperature. In roasting and grilling, we have not only to guard against excessive temperature, but also evaporation. If this be not prevented, we will have desiccated rather than cooked meat. This is a most common error of cookery; lately, however, patent roasters have been put upon the market and widely sold (at least in this vicinity), which fulfill the indication.

In stewing, the object is to have as much of the meat dissolved in the cooking medium—the water—as possible; hence it should be immersed in cold water and the temperature *slowly* raised, so that the early coagulation of albumen may not arrest the escape of the juices.

Frying is an operation practically impossible to the average cook, if the principles here laid down are carried out. Time forbids my going into the details of the several methods of cooking, and I must, therefore, content myself with these few general hints.

Our means of aiding the digestive process within the body are exceedingly limited. Beyond affording temporary relief with drugs, which irritate the coats of the stomach, causing a little extra flow of gastric juice (and these fail with repetition), or with pepsin, pancreatin, and the like, which digest small quantities of food, we are powerless to act. Far greater is the aid which we can render digestion by a careful selection of food, and having it properly cooked and masticated. Of not a little importance, likewise, is quantity. No more food should be ingested than can be readily assimilated. The Bushman who, in the twenty-four hours, can eat two dozen pounds of hippopotamus liver, a bucketful of broiled marrow, besides whole handfuls of peanuts and hackberries, is not so much more disgusting than he who goes to the evening reception and overloads his stomach with fried oysters, croquettes, lobster-salad, five or six varieties of ice-cream, besides cakes, coffee, ice-water, and numerous other articles. Intemperance in eating is to be as carefully avoided as intemperance in drinking.

In health, the appetite is a faithful exponent of the demands of tissue-nutrition. The dyspeptic has, however, more often a morbid craving for repletion, which must be carefully guarded against.

The important points, then, to be considered in connection with dyspepsia, are the quality of food, the quantity, cooking, and mastication. If these are properly attended to, we would have little need of medication.

THE MANAGEMENT OF CASES OF ABORTION.

BY STANLEY M. WARD, M.D.,
ELLENVILLE, N. Y.

The term abortion is used throughout this article to indicate the expulsion by the pregnant uterus of its contents prior to the seventh month of utero-gestation. Between the seventh and ninth months, inasmuch as the process of expulsion approximates so closely to labor at term, I think premature labor is a better term to apply.

As a rule, the nearer the fœtus has reached the seventh month of its intra-uterine life, the more pain the mother will undergo during her labor, but the less will she be exposed to the dangers of hemorrhage. The opposite of this rule is also true.

Of course, it is the duty of every physician to endeavor to thwart the efforts of the pregnant uterus when it attempts to expel its contents prematurely; but, in a majority of cases, after the woman begins to experience the pain of uterine expansion, let there be never so little flow, his efforts will be in vain. In a certain number of cases, we find something like the following to deal with: Some pain and hemorrhage, elongated cervix, rigid os, slight rise in body-heat, nausea, and vomiting. If we are morally certain that abortion is about to take place, our efforts should be directed toward hastening that event, and we should endeavor to empty the uterus as quickly as is compatible with the safety of the patient. A hypodermic injection of morphia, with a hot vaginal douche of some antiseptic solution, is administered, and the woman put to bed. After waiting from half to three-quarters of an hour, we make another vaginal examination, and our future treatment is largely guided by the result of that and the length of time the woman has been pregnant. If only for six or eight weeks, we shall not expect much of a product of conception, and the os uteri will not dilate much. The danger will be from hemorrhage, and later on from septic troubles should the uterus not be thoroughly cleared. The one thing *not to use*, no matter how severe the bleeding or how faint the pains, is ergot. A good many practitioners do use it, as I am aware, and a good many have trouble, as I have cause to know. A tampon made by winding a piece of asepticized cotton firmly and strongly with stout thread can be packed into the vagina, pressed firmly against the os, and we are masters of the situation. If the symptoms are urgent, it behooves us to stay with the patient; if not, we can leave, calling again in six to ten hours, when we shall probably find the contents of the uterus coming in good shape on the removal of the tampon. If not, the treatment may be continued by inserting another; and, if the patient is nervous and excitable, a fifteen-grain dose of chloral hydrate may be given if the stomach will allow it; if not, double the quantity by the rectum or an hypodermic injection of morphia if the physician prefers. After having satisfied myself that the uterus has been completely emptied, I am in the habit of ordering a douche twice daily of some antiseptic solution, and usually place my patient on

quinia and ergot—two grains of the former made into pill-mass with a half-grain of the so-called ergotine—thrice daily for a week. Cannabis Indica makes a valuable addition to this pill if there is a nervous disposition or if the patient is inclined toward melancholia, as sometimes happens. Thus I would manage an abortion happening early in fœtal life. Later on, as I have said, the treatment approximates toward that of labor at term. In any case where dilatation is slow, whether hemorrhage is severe or not, I use the tampon with the greatest faith and confidence. Equally am I certain that the use of ergot is productive of harm. I have seen the os uteri close up under its action time and again. The physician is often called to see patients whose history is something like this: A woman, after having had cessation of menses for three or four months, morning sickness, enlarged breasts, etc., begins to be "unwell." She wears a napkin, thinking herself about to menstruate. For a few days, the flow is slight, accompanied with some pain; suddenly, while at stool or while lifting, a great gush of blood comes from the vagina; with difficulty she reaches her bed, the practitioner finds her exsanguinated, pulseless or nearly so, flowing profusely. She may be unconscious. He gathers a little history, but there is no time to go much into the minutiæ. The first step is an examination. The os is somewhat dilated, the vagina filled with clots. He removes these and applies a tampon and administers restoratives. He should not give ergot unless he can be sure, which from the nature of the case he cannot be, that the uterus is empty; if he does, the flowing may stop, to be sure; but the uterus will contract, and he is only exposing the woman to danger in the future. I have seen such a case, in which ergot was used freely, the patient rallied from the profound syncope, and the hemorrhage stopped; but she bled for a month in varying quantities, at times profusely, and it was only after a bit of the placental membrane had been removed that it ceased. In the case I have ventured to portray, as soon as reaction has taken place, the physician must look for the offending substance. In the majority of cases, it can be easily found and removed, frequently with the fingers or dressing-forceps. If the tampon is applied thoroughly, it controls the hemorrhage and helps dilate the os uteri. This is an entirely different state of affairs from a case of *post-partum* hemorrhage at full term labor. In the one case, we have a greatly enlarged uterus which we know to be thoroughly emptied—our efforts are all directed toward closing it; in the other, a uterus not enlarged to any great extent, its condition we do not know, though we presume it to be only partially empty—our effort is not to close it and so shut up within it the very thing that is causing the damage. Of course, the physician is expected in such a case to remain with his patient, and not to leave her until all danger is past; and all danger *is not past* until the bit of placenta or whatever it may be is removed and the uterus thoroughly contracted If necessary, a dull curette must be used and the interior of the uterus scraped; but such measures are rarely necessary if the physician treats the case properly. I have assumed in the above that the physician, in making his first examination, fails to find within easy reach any substance that might be the cause of the hemorrhage; if he is so fortunate as to find anything, he of course should remove it, the quicker the better; and, as before stated, if he is now *certain* that the uterus is cleared, he may use ergot either by the mouth or hypodermically, preferably the latter.

A word or two about the method of using this drug: I have given the normal liquid ergot, Squibb's and Wyeth's fluid extracts, time and again by means of the hypodermic syringe, and never saw an abscess result. I usually give a half-teaspoonful at a dose. I administered during one night six such doses, to a woman who was flowing profusely and unable to swallow, and did not have a single bad result.

There is still another class of cases in women who have aborted; this is made up of those who have had bad treatment, viz., ergot administered at an improper time, and thus part of the products of conception have been shut up within the uterine cavity; and also of those women who, commencing to flow after an amenorrhœa of several months, are uncertain as to whether or not they have aborted. This is a difficult class of cases to treat. There is, on the one hand, the natural disinclination which the patient feels to having her uterus dilated, and, on the other, the uncertainty which, in the light of the imperfect history that most such cases give, the physician has as to just what proceeding will relieve the woman most safely and quickly. One patient consulted me for malaria, giving an excellent history of intermittent fever; but she incidentally remarked that she was not "regular." A little further questioning disclosed the fact that she had aborted. The malarial symptoms were septic from retained mem-

branes, and a dangerous hemorrhage, occurring within thirty-six hours from the time I first saw her, made the case clear. I removed some fragments from the uterus, and washed out the cavity with warm sublimate water. The malaria vanished, and she made a good recovery. In this case, I was saved the labor of dilating the uterus, as nature did it for me, as she will in a certain number of cases; but, where this does not happen, and such symptoms come on, symptoms which can be interpreted in only one way, dilatation by tupelo or sea-tangle tents, with a tampon thoroughly aseptic, must be resorted to. When dilatation is as complete as is necessary, a weak solution of iodine, sublimate, or carbolic acid may be thrown into the uterus, with the hope that the offending matters may be washed out; if this hope is not realized, a dull curette should be employed. There are some of the leaders in the obstetric world who advocate a greater reliance on the natural powers, in the meantime using rest, opium, quinine, and ergot with vaginal injections, to accomplish the desired result. I trust that I am as conservative in the treatment of these cases as the safety of the woman will allow; but, after all is said, some cases will fall into our hands in which radical measures must be employed. We should always give nature a fair field and all the chance in the world; but it may well happen that, while waiting to see what she can do, we lose our golden opportunity, and, when too late, attempt to do what, a few days before, could have been done just as well and with far different results. I believe, too, that if, within a few days of the time we may suppose the woman aborted—speaking now of those cases in which it is difficult to say from the symptoms and history whether or not such is the case—we dilate the os uteri and wash out the cavity, we shall be spared the use of harsher means. One thing, especially in this class of cases, it is absolutely necessary to get—the confidence of the patient; with this and the ability to interpret correctly what we see and hear, with a cool head and some tents, dull curette, tampons, a placenta-forceps, a good syringe, and an antiseptic, we shall seldom if ever fail to relieve our patient.

—It is announced, from Maysville, Ky., that a child recently born there has no arms, but a protuberance extending a few inches from each shoulder and terminating in the fingers. Its legs are said to be very short and stubby, and to turn backward.

MANAGEMENT OF THE NEW-BORN CHILD.

BY A. ADY, M.D.,
MUSCATINE, IOWA.

Late articles in the REPORTER remind me that I have some peculiar notions about the management of new-born children, and I would like to communicate them to your other readers. In the first place, I never allow anything made of wool to be worn next to the skin; let it be ever so soft and fine, it will tickle and irritate the cuticle of some little ones and make them cross and fretful; then come catnip and other remedies for colic, and in a short time something does ail the baby. Having often seen fretful babies made good and quiet by the removal of such clothing, it is the first thing seen to when consulted in such cases.

My favorite apparel for a first dressing is a cotton-flannel slip, and diaper of the same material (soft side next to the skin); nothing more—no bands, no skirts, nothing to punish the little fellow. After this simple toilet, it can be wrapped as warmly as desired; and it will generally be a good baby, and certainly a pretty one in its mother's eye.

Now, about the cord. What is the use of two or three inches of that, full of blood, but to furnish material for sepsis? My way of treating that is, first, put on the two ligatures and separate the funis between them; then, after the child is cleansed (using melted lard or vaseline instead of water and soap), the end of the cord is snipped off along with the ligature and the gelatine thoroughly squeezed out, after which it will rarely bleed to any amount; but, for fear it should, it is tied again as close to the abdomen as can be done without including the integuments. It is then left entirely alone—no band, no application of any kind—and in twenty-four hours the remains of the cord will be nothing but a scab, and in four or five days will drop, leaving a cicatrix in its place. The belly-band, make it of what material you will, is nothing but a relic of barbarism, and of no more use than a band around the head to prevent the fontanel from enlarging—uncomfortable and mischievous in its effects, many times causing and never preventing hernia of any kind. It is a well-known anatomical fact that the inguinal region is the weakest in the abdomen. The band does not protect that in the least; on the contrary, forces the intestines down to it. Even if the umbilical opening has not properly closed, the pressure of a band around

the circumference of the body will only keep a knuckle of intestine in the opening and very effectually prevent its closing, which it will generally do if left alone. Who would think of trying to cure an umbilical hernia with a broad band alone?

During my first fifteen years in practice, I used the ordinary band and compresses for the navel. In that time I had two fatal cases of umbilical hemorrhage after separation of the cord, and several of hernia requiring treatment. For the last twenty years, having a much larger obstetrical practice, and treating every case as indicated above, I have had no hemorrhage, no inflamed or ulcerated navel, and but one case of umbilical hernia.

SOCIETY REPORTS.

GERMAN MEDICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, May 14, 1888.

Vice-President LAWRENCE WOLFF in the chair. CHARLES L. WEED, Secretary.

DR. CARL SEILER read a paper on

Hypertrophy of the Tonsils.

He opened his remarks by stating that as yet we did not know whether the tonsils performed any physiological function or not, but that the view was prevalent that these organs were residuary and of no use in the economy. He stated further that in the normal condition they were invisible, and became visible only by an hypertrophy of their tissue. This view had lately been forcibly expressed by Dr. Daly, of Pittsburgh, and found a proof in the fact that, even when slightly hypertrophied in youth, they usually disappeared at the age of 25 or 30 years. They had no connection whatsoever with the genito-urinary apparatus, as had recently been asserted.

After briefly describing the minute anatomy of the tonsil, the lecturer entered upon the subject proper, and said that we could recognize three distinct varieties of hypertrophied tonsils: first, the ordinary soft hypertrophied tonsil, most commonly met with in childhood and early youth, and rarely found in adult age. This variety is characterized by simple enlargement of the the tonsillar tissue, with a corresponding increase in the size of the crypts, which latter mostly contain plugs of white cheesy secretion. This secretion, in some cases, becomes putrid and emits an extremely disagreeable odor. This simple hypertrophied tonsil is frequently the seat of periodical acute inflammation, which may or may not produce parenchymatous suppuration. Coexisting with this chronic tonsillar hypertrophy, we usually find a chronic nasopharyngeal catarrh and more or less hypertrophy of the pharyngeal tonsil. These conditions give rise to a variety of symptoms, the most prominent of which are interference with proper vocalization and articulation, insufficient aeration of the blood, gastric disturbances, and frequently catarrh of the middle ear.

The second variety is the so-called scirrhous tonsil, first mentioned by Dr. Jarvis, of New York, which is characterized by a smooth exterior surface and a hard cartilaginous feel to the touch of the finger or probe. The crypts are usually not enlarged, and, if so, rarely contain the cheesy secretion. This variety of hypertrophied tonsil is met with usually in young adults, and is rarely, if ever, the seat of acute periodical inflammation. The hardness is imparted to it by a deposit of connective tissue between the cellular elements, and particularly around the blood-vessels, canaliculizing them and thus depriving them of their contractility. They interfere, by their presence, with vocalization and articulation; and nasopharyngeal catarrh, as well as chronic laryngeal inflammation, frequently coexists with them.

The third variety may be called the ragged hypertrophied tonsil, and is nothing but the result of the first variety having been the seat of frequent tonsillar abscesses, which have caused parts of the tissue to slough away, leaving a ragged mass of tonsillar tissue between the faucial pillars. It is usually found in young strumous adults, and is perhaps the most dangerous to the general health, inasmuch as it gives lodgment to septic material, and thus, in many cases, produces chronic septicæmia.

Dr. Seiler then entered into the consideration of the treatment of hypertrophied tonsils, and said that in all cases the offending masses should be removed, but that the method by which this was to be accomplished should be carefully considered and adapted to the requirements of each individual case. All chemical caustics applied to the surface of the tonsil were worse than useless, as their application gave rise to a great deal of pain and had to be kept up for a considerable length of time to produce

any results at all. In the ordinary soft variety, the tonsil was best removed by ablation with the tonsillotome. Care should, however, be taken not to wound the edge of the anterior pillar, because a small branch of the tonsilar artery runs close to this edge, and, when cut, gives rise to hemorrhage difficult to control. If the anterior pillar is adherent to the tonsil, it should be loosened, and if this is not possible, owing to the bands of fibrous tissue connecting the pillar with the tonsil being too strong to be torn, the tonsillotome cannot be used with any degree of safety, and the galvano-cautery knife should be used. After the projecting portion of the tonsil had been ablated, the cut surface should be brushed over with a 60-grain solution of nitrate of silver, to cause contraction of the capillaries and to cover the wound; and any secondary hemorrhage, which, however, rarely occurred, should be controlled with a strong solution of tannic and gallic acid, used as a gargle. The old method of removing the tonsils with the volsellum and bistoury, the lecturer said, was unsafe, as the edge of the anterior pillar, even when not adherent, was too easily wounded by the heel of the knife. Total extirpation or enucleation was also dangerous, besides being unnecessary, except in the extremely rare cases of cancerous growth in the tonsil.

The safest and only applicable one in cases of ragged tonsil was the galvano-caustic method of removing hypertrophied tonsils. In applying this method, the galvano-cautery knife should be heated to a bright red heat and should then be pressed into the tissue of the tonsil by entering one of the crypts and cutting with it from within outward, so that the eschar resulting from the burn can easily fall off and does not become impacted in the tissue of the tonsil. This procedure, Dr. Seiler said, did not give rise to any pain, and should be repeated at intervals of a week or ten days, and from four to six applications usually sufficed to reduce the tonsils to a size compatible with health and comfort of the patient. Under no circumstances should any operation for the removal or reduction of hypertrophied tonsils be undertaken while the organ was in a state of acute inflammation. In the case of the ragged tonsil, scraping the tonsilar tissue from the capsule with a sharp curette had been recommended; but this method was not only very bloody, but also painful, and on that account the galvano-cautery was to be preferred.

For the removal of the scirrhous tonsil, Dr. Seiler recommended the Jarvis snare as the best and safest instrument. The steel wire loop should be laid around the enlarged tonsil, and, by turning the screw, should be gradually decreased in size until the portion encircled by the wire was cut off. If done slowly, the operation occasioned very little pain, and time was given for the edges of the rigid vessels to become agglutinated, so that little or no hemorrhage resulted. The best way, he said, was to start the snaring process and then let the patient turn the screw himself, trusting to him that it was not done too quickly; for the patient would tighten the loop until he felt the pain, and would then stop, to begin again when the pain had ceased. The time occupied in thus removing a scirrhous tonsil was from two to three hours.

Dr. Muehleck, in opening the discussion on Dr. Seiler's paper, suggested that many of the supposed cases of hæmophilia were cases of scirrhous tonsil, in which the canaliculization of the vessels caused profuse and persistent hemorrhage after ablation. For this reason he asked the lecturer to definitely state the diagnostic differentiation between the soft and fibrous forms.

Dr. Vansant desired the judgment of Dr. Seiler upon the use of alkalies in acute tonsilitis, especially of sodium bicarbonate and borax. He inquired, furthermore, whether, after repeated attacks of inflammation, the resulting hypertrophy ever spontaneously disappears. In the matter of diagnosis, it should be borne in mind that other tissue-changes than simple inflammation and hypertrophy may have their seat in the tonsils. It is a question whether or not the initial lesion of syphilis would be likely to lead to such error. The cases he had observed presented a mere superficial ulceration without induration. In none of the cases reported by Tchisbriakoff, Peterson, Tomashevsky, and Severi within the past year was the fact of induration mentioned. He would like to know whether this peculiarity is constant in a lesion in this location.

Dr. Wolff had had considerable success in aborting acute tonsillitis by Dr. Seiler's method—viz., by penciling with a 25 per cent. solution of silver nitrate. The attacks were, however, aborted only when the application was made within the first twenty-four hours; nevertheless, even a later application was generally successful in preventing suppuration, besides giving great comfort to the patient by reducing the tension and pain.

Dr. Friebis noted the frequent association of tonsillar hypertrophy and otitis media, but was not clear in his mind whether the

same is to be attributed to impeded nasal respiration (mouth-breathing), or to the septic influences from the crypts, or to mechanical obstruction of the mouth of the Eustachian tube by the swollen gland.

Dr. Miller, in using the cautery knife, had frequently had it stick in the tonsilar tissue, and had caused pain and hemorrhage by its violent removal. This difficulty was due to a too early shutting-off of the current, and could easily be avoided. The knife should be hot when applied and removed. He had used the galvano-cautery more often than the guillotine—even in the soft variety—owing to an unconquerable prejudice on the part of the patients against any cutting operation. For the same reason the blade must be heated after it is in the mouth, so that the patient may not see it. If both tonsils were treated at one sitting, deglutition would be rendered unnecessarily painful. He treats them, therefore, in alternation, with two sittings per week. He reduces them so that they do not project beyond the pillars, and leaves the rest to cicatricial contraction. A most useful battery for the purpose is that of Dr. Seiler. The method of gouging out the growth with the finger is not only barbarous but dangerous. He would not agree with the lecturer that the tonsils are necessarily in a pathological state when they fill the space between the anterior and posterior pillars and do not extend beyond them.

Dr. Weed quoted the two cases reported by Croly, of primary sarcoma of the tonsil, in both of which incisions were made to evacuate the supposed abscess. Such an affection might be mistaken for an hypertrophy even more easily than for quinsy, and the guillotine might evoke a dangerous hemorrhage. In cases of acute tonsilitis, the diagnosis is rendered difficult by the fact that a variety of affections have here their local manifestations. Le Gendre considers the tonsil the site of the initial lesions of scarlatina and diphtheria, and Fränkel calls attention to other varieties of septic infection from this gland. Le Brun looks upon all tonsillitis as infectious, and regulates his therapeusis accordingly; on the other hand, Frölich reports a group of cases, in some of which the tonsil seems to have been the seat of local lesion, although not the point of original inoculation. The first case was one of so-called follicular tonsillitis followed by a fatal suppurative peritonitis. At the autopsy, Frölich and his assistant sustained slight wounds with a resulting follicular tonsillitis. A number of the household developed similar symptoms. In addition to the cases of syphilitic inoculation quoted by Dr. Vansant are a number collected by Dr. Delavan in the Annual of the Universal Medical Sciences, just published. There being, therefore, so many varieties of acute tonsillar inflammation, it is idle to vaunt any one remedy as being suited to all cases. The strong solution of nitrate of silver had in the speaker's hands seemed to abort the attacks of recurrent quinsy, or had at least modified the process, but had failed in other forms of inflammation. He was unable to state whether the virtue of the silver salt was in its astringency or in its germicide power. In tonsillotomy for hypertrophy it is, according to the experiments of Zuckerkandl, impossible to wound the internal carotid without cutting the wall of the pharynx.

Dr. Seiler, in closing the discussion, said that the differentiation between the soft and scirrhous varieties of hypertrophy was easily made by the sense of touch, the former being soft and doughy while the latter was hard and cartilaginous and never occurs before the age of puberty. He believed that an initial lesion of syphilis upon the tonsil was never indurated. This was owing to a poverty of submucous connective tissue. An early diagnostic sign is glandular involvement at the angle of the jaws. The much-vaunted alkaline treatment of acute tonsillitis with bicarbonate of soda or borax had, in his experience, given no results greater than a temporary alleviation of the pain. The only abortive treatment with which he had had success was that mentioned by Dr. Wolff. There is no doubt that hypertrophy of the tonsil does sometimes disappear with the advancing age of the patient. This is due to a physiological atrophy of the glands. The periodical attacks of acute inflammation may be prevented by a proper tonic treatment, attention to hygiene, and particularly, by ablutions of the neck and chest, morning and night.

—The *New York Times* says that an infant, eleven months old, was taken ill suddenly one day last week, in Hart Park, S. I. A doctor could not determine what ailed it. Finally, Mrs. Grinnell discovered a long piece of black thread hanging down from its stomach. She endeavored to pull it out, but could not do so. A doctor was summoned, and, after cutting the skin, found a needle about two inches long attached. He pulled it out, and the child is reported to be getting well. It is thought that the needle was lying on the floor with the point raised, and that the baby crept on it.

SPECIAL CORRESPONDENCE.

MEDICAL JOTTINGS FROM THE OCCIDENT.

SAN FRANCISCO, CAL., May 28, 1888.

No. 2.

Since my last letter, I have visited *one* of the State Lunatic Asylums—Stockton. The second is situated at Napa, and a third is in construction at Santa Clara. Three asylums, one State of a million population. Do not adjudge us all insane! It is supposed by our genial "glorious climate" advocators that, like phthisis pulmonalis, the majority of these cases are imported from the East. The pet expression of an enthusiastic Californian, "God's own country," does not always bear a close examination. Lung-troubles of all kinds in San Francisco head the list of death-rate. The loyal "Frisconian" tells you of importation, dreadful climate of the East, &c.; but an unbiased observer can readily see, in the *t. d.* changes of climate in "Frisco," sufficient reason for lung, throat, and catarrhal affections. The well-known restriction to State Asylums of those only who are residents of the State and become insane within the State shows at least one thing—that our glorious climate does not prevent lunacy. I do not know anything of the usual per cent. of insane to population in the East or elsewhere, but that Stockton has 1600, and, although only built four or five years ago, already complains of lack of room; that Napa has perhaps as many more, and that the demands of room require a new building at Santa Clara—all go to show to me not a very favorable report.

Dr. Mays, the superintendent of the Stockton Asylum, is a man who seems to be especially fitted for his position. He is Professor of Mental Diseases in the University of California. The Doctor put me in charge of Mr. Stockwell, the supervisor, who kindly showed me carefully the entire make-up and management of the institution.

The grounds occupy 107½ acres, the male and female departments being separate affairs, at least one-fourth of a mile apart. The condition of the wards, the protection against fire, the system of prompt communication with the central office, are all that one could desire. An improvement in drainage could be made. The experiment of disposing of the sewage-matter on the land has not been wholly successful, on account of the adobe character of the soil, which had never before been cultivated. Little difficulty will be experienced during the summer season, when the ground is dry; but, when saturated thoroughly by the winter rains, the land does not absorb the offensive matter, and some plan should be adopted whereby the drainage of the asylum can be discharged into some water-channel, to be carried away by the winter's floods without becoming offensive and dangerous to the health of residents of the vicinity.

As in this climate vegetables grow the year round, about enough is raised for the demand, except potatoes. 2000 loaves of bread a day are baked, and a fine palatable article is produced. A dairy barn accomodating seventy cows of blooded stock comprises a portion of the property of the institution. Dr. Mays is quite conservative as to the use of medicines. He has found but little use for some of the newer and extolled hypnotics. Freshly prepared (always) chloral solution and the bromides are the standbyes. Moral treatment is the chief reliance, and he turns out forty per cent. of cures. The straight-jacket is abolished; straps and muffs are the only restraints used. Dr. Mays is a firm believer in the advantages of early hospital treatment of insanity. He says it is only the recent cases that recover. If the patient has been in the asylum a year and a half or two years, his prospects of restoration are fast dwindling to a vanishing point. He is sure that the fact remains that, if taken in time, in its early stages, insanity is as curable as the average run of diseases, except where there is a palpable hereditary fault. The cure-rate of those who have been insane over four years ranges *below one per cent.* A certain number of the forty per cent. dismissed cured will relapse, of course, for it is known that one attack of brain-disease predisposes toward another; but is it true, after all, says Dr. Mays, that the liability to after-attacks is any greater in affections of the brain than it is in disease of the heart, kidney, or other organ? He thinks Maudsley's estimate, that, of those discharged as cured, one-half will be returned sooner or later, over-high.

Dr. Mays has been doing good work in scattering the modern distrust of insane asylums. He delivered an address at the graduating-exercises of the Medical Department of the University of California, November 15, 1887, in which he made this subject his text. He asks how we shall account for the suspicious feeling that seems to pervade the public mind with regard to insane asylums—how account for the ready credence

given to stories of cruelty and outrage, stories either coined from the distorted brain of some half-cured patient, or else the malicious invention of some discharged employé? Why do people who in other affairs of life exercise a wise reservation of judgment join at once in the chorus of detraction? There is evidently a deep-rooted distrust on the part of the public generally. The answer to these questions is that it is a residue of a once prevalent habit of thought, of a feeling that once had good reason to exist. The traditions of centuries are not overthrown in a day. He further says: "For a thousand years the very conception of insanity was enough to strike terror to the stoutest heart; for hundreds of years a lunatic asylum was the most loathsome and dreadful of prisons—the abode of suffering and misery. These horrors were stamped, generation after generation, upon the minds of the people at large, until the memory of them has been handed down like an instinct, and this is the heritage that the modern asylum has to contend against."

PERISCOPE.

Case of Hæmatoma of the Vulva in a Non-pregnant Woman.

Himmelfarb (*Centralblatt für Gynäkologie*, No. 9, 1888) says that hæmatoma of the vulva usually occurs during pregnancy, and most frequently while birth is taking place. It has been occasionally observed as a result of direct violence. The author reports a case in which the labium was bitten immediately after coitus. The woman felt much pain, and noticed that a large swelling of the right labium majus developed quickly. She did not seek advice for a week. When examined the swelling was found to be the size of a large man's fist. It was oval in shape, and involved the whole length and thickness of the labium; it concealed completely the entrance to the vulva, and had to be drawn on one side to allow the urine to be passed. The swelling was very painful, bluish-red in color, elastic and slightly fluctuating. There were no varicose veins either of the labia or the legs. Cold compresses were applied, and after a few days' rest the pain disappeared. The swelling was then opened, the clots cleared out, and the wound plugged with iodoform gauze. The dressings were changed daily at first, and then every second or third day. The wound healed in three weeks. The case is of interest on account of the size of the swelling. All authors state that hæmatomata occurring in a non-puerperal state attain only small dimensions. Zweifel says they are never larger than a hen's egg; and Hildebrandt that they may be as large as an apple, but that, owing to the hardness and resistance of the subcutaneous and subfascial tissue, they are more sharply defined and rounder than when occurring in the puerperal state. In the case related the swelling was oval, and at least as large as a man's fist. Usually they are caused by great violence, and only a few cases have been recorded in which a slight injury has been sufficient. The only reasons which could be found for the existence of hæmatomata in three such cases the author has collected were respectively overstraining at the stool by an old woman, the lifting of heavy patients by a young nurse, and the clumsiness of a husband on the first night of his married life. Himmelfarb suggests that possibly the congestion of the parts after coitus may have had something to do with the size of the tumor.—*Medical Chronicle*, June, 1888.

Therapeutics of Hay-Fever.

Dr. Carl Genth, in a communication to the *British Med. Journal*, June 16, 1888, says that for the past ten years a young medical man of his acquaintance has suffered so severely from hay-fever from the beginning of May to the end of June that his practice has been seriously interfered with. It will be understood, as a matter of course, that he had, in succession, tried all the many and much-lauded remedies without any good result. Quinine, in large quantities, alone produced favorable results, and not before symptoms of poisoning presented themselves. It may not be without interest to mention that urticaria broke out, beginning on each side of the spine, following the course of the chief nerve-branches down the arms and legs, and finally covered the whole body. This painful state lasted for three days, at the end of which the hay-fever disappeared—leaving in the patient, however, no desire to repeat the experiment with quinine.

In a comparatively large number of cases of hay-fever, Dr. Genth has found that the primary indication of the disease is a slight twitching sensation at the inner corner of the eye. This sensation becomes more intense day by day; next follows a swelling of the conjunctiva, with all the accompanying symptoms of acute conjunctivitis. The symptoms referable to the mucous mem-

brane of the nose—asthma, etc.—set in later. These slight premonitory symptoms, which sometimes precede the final outbreak by a fortnight, and perhaps disappear with a change of weather, may easily be forgotten. But even assuming that, now and again, the disease does not begin in the eyes, but in the nose or the bronchial tubes—a possibility which, in principle, cannot be rejected—the exception would not by any means invalidate the assertion that hay-fever usually begins with the symptoms of conjunctivitis.

Upon these facts he builds his therapeutic plan. Since the first symptoms of hay-fever manifest themselves in the eye, it is probable, he says, that the agent which is to be regarded as the cause of the hay-fever (he does not here refer to the pollen grains which are everywhere present during the season in which the fever prevails, and are consequently to be found in the secretion of the conjunctiva and in the mucus of the respiratory tracts) first attacks the conjunctiva. Under favorable circumstances—such as heat—it multiplies there, and then diffuses itself over the mucous membrane of the respiratory organs, perhaps through the medium of the lachrymal canal. To be effective the condition must be attacked by local treatment, directed to the eyes at the earliest possible date.

On the advice of Dr. Pagenstecher, of Wiesbaden, Dr. Genth chose instillation and bathing of the conjunctiva with sublimate solution of the strength of one in 3,000. The bathing began, perhaps, fourteen days before the appearance of the hay-fever, whenever the patient returned home after open-air exercise. The patient was, besides, required to keep as cool as possible, and to wear pale-blue spectacles. The result of the treatment was that he remained free from his trouble for a length of time. Not before the end of June did slight irritation of the conjunctiva reappear, which, however, could not be compared in intensity with former attacks, and involved no complication. Relying, probably, upon his generally healthy condition, the bathing had not been performed with sufficient energy. Although the sublimate solution came in contact with the mucous membranes of the nose or throat only slightly, or perhaps not at all, neither of these organs was affected, which would have happened if the virus of the hay-fever passed into the body through the nose and mouth. In such an exceptional case, he says, it would be simple enough to apply the solution by a nose-douche, by gargles, or perhaps even by cautious inhalation.

Functions of the Sinuses of Valsalva and Auricular Appendices.

Mayo Collier (*Lancet*, June 16, 1888) summarizes his opinions formed from a study of the functions of the sinuses of Valsalva and auricular appendices, in the following words: 1. The sinuses of Valsalva are constant features of all mammalian and avian hearts. They are not pathological formations, but, on the contrary, are absolutely essential to the efficient action of the semilunar valves. 2. The musculi papillares serve the same purpose for the auriculo-ventricular valves as do the sinuses of Valsalva for the aortic. 3. The auricular appendices probably complete the distension of the ventricles without appreciably altering the general tension of the auricles. 4. The first sound of the heart is not due to the sudden tension of the tricuspid and mitral valves. 5. The semilunar valves open and shut gradually; the second sound of the heart being due to the sudden difference of pressure on the two sides of the valves at the moment of commencing diastole of the ventricles, causing them to vibrate. 6. At each systole the contents of the ventricle distend only a segment of the length of the aorta, the force of the ventricle exerting little influence directly on the general circulation, but indirectly by the recoil of the elastic aorta. 7. That the pulse is due to a wave of dilatation and recoil, which wave is normally single. 8. That when the arterial tension is below a certain standard, one or more secondary pulse-waves can frequently be felt, due to a redistension of the penultimate section and its consequent repeated recoil.

Use of Saccharine to Prevent Ammoniacal Change in Urine.

Dr. James Little, President of the King and Queen's College of Physicians in Ireland, in a paper read before the Section of Medicine of the Royal Academy of Medicine in Ireland, April 20, 1888, says that the management of cases of chronic cystitis has been greatly improved of late years, and as a consequence its power of inducing secondary changes in the kidneys, and so destroying life, has been greatly lessened. Of these improvements, he thinks the first place is due to the manufacture of catheters which can be easily used by the patient himself without risk, by which means the accumulation of residual urine in the bladder is prevented. At the same time, medical men have become impressed with the neces-

sity of urging scrupulous cleanliness in the instruments introduced into the bladder—a precaution which, a few years ago, was certainly neglected. As a consequence of the introduction of catheters which can be passed without pain or violence, he believes much relief has been given, and ammoniacal changes in the urine prevented by washing out the bladder with warm water or antiseptic solutions; but, he says, it has always appeared to him that it is better, if it is possible, to keep the urine free from decomposition by medicines given by the mouth, and so reduce instrumental interference to a minimum. This practice he has always followed, especially in the case of aged persons who have come into his hands, and in whom chronic cystitis constituted part of their sufferings. Unfortunately, such patients have not infrequently irritable stomachs, as well as irritable bladders; and most of the drugs which are useful in keeping the urine sweet are liable to disagree and cause sickness. This certainly applies, he says, to the remedies which were chiefly used a few years ago—quinine, tincture of perchloride of iron, benzoic acid, and benzoate of sodium. Boric acid, which has been more used of late, is not so likely to sicken, and is, he thinks, best given in lemonade.

For the past three years, he says, he has been asked, from time to time, to see a woman, nearly eighty years of age, who is quite confined to bed in consequence of chronic disease of the bladder, which gives rise to frequent and painful calls to pass water. The urine always threw down a copious purulent sediment, and, except when decomposition was prevented by treatment, was always ammoniacal. The patient has many times passed, with great suffering, phosphatic calculi, and Dr. Little thinks many such exist in the bladder, but she has always refused to permit any surgical interference beyond the occasional introduction of a soft catheter and the washing out of the bladder by a woman who acts as her nurse. Quinine and boric acid, when taken in fair doses, always purified the urine; but about three months ago her stomach became so irritable that these drugs could not be borne, and the washing out of the bladder with a weak warm sublimate solution could no longer be practiced, as the passage of the catheter had become exquisitely painful. The consequence was, that the urine became so offensive that the odor met one on the stairs, and the patient's attendants had often to leave the room to avoid being sick. In this difficulty it occurred to Dr. Little to try saccharine. He directed six of the tabloids to be used daily. In three or four days the urine was no longer offensive. The patient has continued their use ever since, and the urine has not again become ammoniacal, though there is little, if any, diminution in the quantity of contained pus.

Since the foregoing case came under his observation, he has had four other opportunities of observing the effect of saccharine in patients who were passing ammoniacal urine. They were all males: one a case of catarrh of the bladder, in a paraplegic gentleman; one a case of chronic cystitis, with enlarged prostate; and two cases, in which there had existed stricture of the urethra, but in which, although a surgeon had successfully dilated the stricture, the urine remained ammoniacal. In all these cases the saccharine was distinctly useful, but in all its administration had been combined with the daily use, by the patient himself, of a catheter, so as to prevent the accumulation of residual urine in the bladder—a precaution without which no drug will prevent decomposition of the urine.—*Dublin Journal of Med. Science*, June, 1888.

Damson-Stone Lodged in the Right Bronchus; Tracheotomy; Recovery.

The following case, under the care of Mr. Reginald Harrison, is reported from the Liverpool Royal Infirmary: Jane S., 8 years old, was admitted on April 4, 1888. Ten days previously, while laughing when eating some damson jam, she thought she had swallowed a stone. This was immediately followed by a violent fit of coughing, for which medical aid was summoned. These paroxysms of coughing were repeated at intervals. On admission, there was slight flattening of the right side of the chest posteriorly, with diminished expansion; and a rhonchus was distinctly audible. Breath-sounds feeble toward base, the rhonchus increasing in loudness as the bronchus was approached opposite the fourth dorsal vertebra, where the sound was best heard. The rhonchus was twofold, inspiratory and expiratory; and there was sometimes a sound as if something fell between expiration and inspiration. Breath-sounds on the left side normal, but with transmitted rhonchus; respirations 22; pulse 80. Whilst she was under observation in the infirmary she had several attacks of violent paroxysmal cough, when various expedients, including inversion and slapping on the back, were tried, with

the view of favoring the expulsion of the damson-stone, which evidently had found a resting-place in the right bronchus. On one occasion she expectorated a little blood, but as a rule she was going about the ward apparently well.

On April 21, she was placed under chloroform, and Mr. Harrison performed tracheotomy. An incision having been made as low down as possible through the skin, the trachea was quickly bared with a blunt director. A free incision into the trachea was then made, three or four rings being divided. Just as the child was being inverted, the stone was shot out into the wound, where it was easily seized with the fingers. A tracheotomy tube was introduced and retained for a few hours, but proved useless. The patient breathed freely through the opening, and expectorated for the first four or five days a considerable amount of pneumonic-looking sputum. Then convalescence rapidly took place, and she left the infirmary quite well fourteen days after the operation, with the wound completely healed.—*British Med. Journal*, June 23, 1888.

Peculiar Neurosis Allied to Chorea.

Dr. W. T. Gairdner, in reporting this case to the Medico-Chirurgical Society of Glasgow, April 6, 1888, said: "G. C., thirty-three years old, assistant timekeeper. This man is the subject of a kind of clonic spasm, or 'insanity of the muscles,' resembling chorea as regards the individual irregular movements, in that they are altogether non-rhythmic, and, as it were, out of all reckoning as to order and sequence; but, on the other hand, so far from affecting, as chorea commonly does, those actions most which are normally the *most* volitional and the most highly differentiated, it is in fact the opposite class that is here usually the most involved in the disease. Thus, he can carry a full glass to his mouth with either hand, and without any notable disturbance; he can walk perfectly well, can write in a good ordinary hand, which shows almost no traces even of tremor. When he is at rest in the recumbent posture, there are times when it might appear as if nothing were wrong; but if he is caused even to speak, or to make any kind of movement when in the position of dorsal decubitus, spasms come on, more or less, *but not necessarily*, or even chiefly, in those muscular groups which are thus called into voluntary action.

"I have witnessed the spasms to-day in many parts of the trunk of the body and neck—*e.g.*, the rectus abdominis, especially the left and the upper part; the platysma, and probably some of the deeper muscles in the same situation; the muscles which act upon the larynx and trachea *from without*, but *not at all* the internal muscles of the larynx; the facial muscles, grimacing spasm in a mild degree; the muscles of respiration, *only* to the degree of giving rise to slight irregularities, often attended by involuntary emission of sounds, but *not* any asthmatic or other serious embarrassment; the muscles of speech, to the extent of *only* just perceptibly affecting his articulation, but never of making him at all unintelligible. The vesical and alvine evacuations are normal; so are mastication and deglutition, so far as I have been able to discover. The knee-jerk may be taken as normal. The other reflexes have not been investigated. The disease appears to be wholly unaccompanied with pain or fever; but the patient has noticed flushing of the face at times. This used to be more frequent than it is now. The general health is good, and has always been so.

"These symptomatic details appear to me to bring the disease into a certain relation with chorea, but not with any of the tremors, properly so called, nor with paralysis agitans, or disseminated sclerosis in particular.

"The disease has persisted, more or less, for ten or twelve years; it was first observed in the facial muscles, and does not appear to have been of very sudden origin. It was recognized by Dr. Lorraine, of Castle-Douglas, at this time as 'resembling St. Vitus's Dance.' No cause can be assigned, unless it were his having got a knock on the top of his head from jumping up in an entry. He has never had venereal disease. The remedies he has had hitherto have been chiefly these, so far as he knows: 1. Arsenic (Fowler's solution) from Dr. Lorraine, in full doses, and for a long time. 2. Nux vomica, also for a long time. 3. Easton's syrup. 4. Fellows's syrup (one bottle). 5. Belladonna—which did not agree. 6. Indian hemp. 7. Phosphide of zinc. 8. Sulphate of zinc and extract of conium, together, which he thinks has checked the spasms more than the other remedies, and he has accordingly taken it in large quantities. 9. Continuous current, which he thinks did no good. 10. Blisters on back of neck, and iodine painting. 11. Cold water compresses to spine."—*Glasgow Med. Journal*, June, 1888.

Optic Atrophy in Three Brothers (Smokers).

At the meeting of the Ophthalmological Society of the United Kingdom, June 14, 1888, Mr. Edgar Browne (Liverpool) read a paper on this subject. In the first patient, forty years old, vision had failed at the age of twenty-seven. A diagnosis of tobacco-amblyopia was made. The patient reduced smoking gradually, but continued to chew. Vision had steadily failed to shadows, but the pupils were three millimetres in diameter, acted to light, and the patellar reflexes were good. Previously, vision was good; general health always good. Optic discs: typical skim-milk atrophy, with attenuated vessels. He could see a flame or bright reflection from white at the periphery of the fields. The second patient was thirty-three years old; sight became very bad six months before; he also both smoked and chewed tobacco; he could see a little in twilight. The knee-jerks were good. Pupils, three millimetres in diameter, acted to light. The optic discs showed a general appearance of atrophy; vessels pervious, but rather small. He could see white paper test in lower temporal (right) and lower nasal (left) fields, but not at all centrally. In the third patient, vision had failed for two years, patient being twenty-three years old; could read J. 16. This patient discontinued smoking when warned. Pupils sluggish, but acted to light. Peripheral fields for white: both eyes normal; central scotoma for white and red in left eye, for red only in right; color-vision with wools good. Optic discs very white and smooth; veins perhaps a little large. The original assumption that tobacco could cause atrophy had been rather discredited since the significance of axial neuritis had been understood. These cases, he said, were closely related to the hereditary optic atrophy of Leber (though occurring rather late), but the term hereditary should not be adopted till our information was much more exact. In all three cases, tobacco was probably the determining cause of the atrophy. In all, perception of light was better toward periphery than centre; none had visible neuritis; none had cerebral or spinal symptoms. The father, mother, and two sisters had good sight; a collateral relation had suffered. These cases might be taken, he said, as types of one group—namely, those in which an axial neuritis being once established tended to spread to the peripheral fibres, involving both sets in the subsequent atrophy. Exactly the opposite occurred in ordinary neuritis, in which the central fibres (and vision) might escape for a time. The following grouping of cases was suggested: 1. Ordinary tobacco-amblyopia, involving only central fibres; transient, and recovery occurs on removal of the cause. 2. A class beginning with central negative scotomata, which progressed downward till central defect became positive (or nearly so), and axial atrophy might be assumed, peripheral vision being unaffected. The part played by tobacco in these cases required investigation. 3. Cases like those under consideration, in which retro-bulbar neuritis, beginning centrally, spread peripherally, giving rise to more or less pronounced atrophy. Here, he said, the personal proclivity was shown in young persons, members of the same family. If similar groups were found among non-smokers, search would not be required to discover the exciting agent. Beyond these were (4) consecutive atrophy, and (5) atrophy accompanying spinal degeneration. At present the two last groups were well understood, but cases illustrating the second and third groups should be collected. Mr. Hutchinson mentioned a group of three, consisting of two young males who smoked, and the mother of one of them (and aunt of the other) who did not smoke, all affected with optic nerve atrophy. In the case of the woman, the inherited predisposition to nerve lesion must have been very strong. Eventually she became quite blind, but had very good health. Perhaps abuse of tea or coffee might have had a share in bringing about this effect; he was sure that they sometimes caused deafness. He thought the society might investigate the very rare group of women affected with this form of atrophy who did not smoke at all. Mr. Browne had mentioned that his first patient was a total abstainer; this, Mr. Hutchinson thought, rather led to the production of the atrophy than the reverse. Those who indulged in alcohol as well as tobacco were less liable to tobacco atrophy than were abstainers. These cases occurring in families were much more severe, more liable to end in blindness, and much less easily cured than the other forms. Dr. Emrys-Jones mentioned the case of a family of nine children, but only five living, in which two children had atrophy of the optic disc without definite cause, the girl at the age of seventeen and the boy aged nine; total blindness ensued.—*British Med. Journal*, June 23, 1888

—Dr. Y. D. Harrington, of Terrell, Texas, died June 11, 1888.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterise communications intended for publication.

LAPAROTOMY FOR TUBERCULAR PERITONITIS.

A large number of cases are now on record, in which the abdomen has been opened to determine the nature of some obscure disorder, with the result of discovering extensive tubercular deposits in the peritoneum. In these cases, the surgeon has usually carried out a thorough cleansing of the abdominal cavity with some disinfectant solution, adding at times an application of powdered iodoform to the affected surfaces, and afterward closing the wound—the whole procedure being called an exploratory laparotomy. When this was first done, it was with a sense of disappointment, and the operation was regarded at best as one which did not often imperil the life of the patient. But after a while it was noticed that patients so treated often improved manifestly after the operation, and men began to associate the idea of this improvement with those ideas of the nature of tuberculosis of the peritoneum which König has, since 1884, done so much to impress upon the mind of other surgeons. According to these ideas, tuberculosis of the peritoneum is not a mere manifestation of a general disease, but a local affection, and amenable to local treatment, just like tuberculosis of the bones and joints.

As might have been expected, the fortunate issue of operations which may be regarded as accidental *quoad hoc* led to the proposition that the abdomen should be opened and the peritoneum subjected to direct treatment, as a formal method, when there was good reason to believe or to suspect that it was affected with tuberculosis. Not only has this proposition been made, but it has been also carried out in a considerable number of cases. The results have been eminently satisfactory. A year ago, Kümmel reported to the sixteenth Congress of German Surgeons the history of forty cases of laparotomy in tubercular peritonitis. In only two cases did death soon follow the operation; in three of them the patients lived from five to twelve months and then died of general tuberculosis; in two a coincident tuberculosis of the lungs progressed, but no new symptoms of peritonitis appeared. In the rest of the cases the improvement was so great as to lead to Kümmel's calling it a cure. In fact, he is so convinced of the value of laparotomy that he speaks of these operations as having led to improvement in every case, and to recovery in the majority of them, and pronounces the unqualified opinion that tubercular peritonitis is a disease which may be not only relieved, but also absolutely cured. For this purpose he strongly recommends an exploratory laparotomy combined with thorough washing-out of the abdominal cavity, as an operation which promises results which render the risks inconsiderable.

The opinions of Kümmel are shared by a

number of able surgeons in Germany and in America, and deserve very thoughtful consideration. We do not feel that the statistics upon which they partly rest are absolutely demonstrative; but we have no doubt that experience justifies the operation of laparotomy for tubercular peritonitis, and especially when the peritonitis is of an active and threatening character. It seems clear that the operation, in skillful hands, is not one of great risk to life, and that its results are generally beneficial, at least for a while. This is enough to give it good standing among the operations of surgery, and the possibility that it may sometimes be followed by recovery makes its position impregnable.

THE MORRIS PLAINS ASYLUM.

Sometime ago, charges were made that the Morris Plains Asylum for the Insane, in New Jersey, was grossly mismanaged. It was asserted that food and medicine of bad quality were furnished to the inmates, and that the internal government of the institution was improperly conducted. The most prominent accuser was Dr. McFarlane. His accusations had an appearance of veracity, and were no great surprise to persons familiar with other institutions managed by politicians. But they have been denied, and are even now being made the subject of investigation by a committee of the New Jersey Legislature. It happened, on July 9, that Dr. McFarlane and Mr. Halsey, President of the Board of Managers, were on the same train, proceeding to the meeting of the committee, and it is painful to learn that Mr. Halsey "denounced Dr. McFarlane to his face as a lying scoundrel," and not surprising to be informed that thereupon Dr. McFarlane "appeared much disconcerted."

Those who share Mr. Halsey's opinion will be strengthened in their faith by the testimony of various people who supplied goods to the asylum, that their wares were always of the best quality and of full weight, and that they had great confidence in the integrity of the purchasing officer of the asylum.

On the other hand, those who sympathize with Dr. McFarlane may not at once abandon him to his fate because he has been assailed with abusive epithets by a man whom he has made to feel very uncomfortable, or discredit the charges of maladministration against the Morris Plains Asylum because a number of witnesses, implicated in these very charges, intimated their disapproval of him and their entire satisfaction with themselves.

The fact is, the case seems to be conducted too much in the fashion usual for "investigating committees," and there is some reason to fear that it may come to the customary conclusion. But the matter is so important that it is to be hoped it will be thoroughly sifted. If the Morris Plains Asylum has been properly managed, it will be well to have the fact clearly demonstrated; for there have been many who thought this was not the case. On the other hand, if the managers have been unwise or corrupt, the interest of humanity and the credit of a great State are involved in ascertaining the fact and correcting or punishing what has been wrong. The treatment of the insane is one of the most serious responsibilities of those who enjoy their reason and civil rights. Happily, this responsibility is more fully appreciated and better met nowadays than ever in the history of the world; and even such painful episodes as the one going on at Morris Plains have their uses, and indicate the wrongs which still exist far less than they show the wrongs which have been abolished, and the kind and humane sentiment which in this age watches over the rights of the unfortunate class of the insane. The eyes of all managers of hospitals for the insane are turned to what is going on at Morris Plains, and the issue cannot, we believe, fail to be helpful to them in the conduct of those institutions with which they are connected.

A FRENCH CRITIC ON AN ENGLISH WRITER.

In a review of a book on "The Passage of Air and Fæces from the Urethra," by Mr. Harrison Cripps, of London, M. A. Broca, writing for the *Gazette Hebdomadaire*, June 29, 1888, takes the author to task for speaking with the air of an authority upon the subject from knowledge derived exclusively from works published in the English language. Mr. Cripps, as is well known, has made some important contributions to our knowledge in regard to diseases and malformations of the rectum and anus, and is in many respects an author of distinction. But in his last book he has laid himself fairly open to the criticism referred to. And, the matter is a little worse than his reviewer makes it; for the studies which M. Broca says Mr. Cripps has overlooked, and which convict him of error, have already been communicated to English readers—in this country, at least.

The matter in question is of less consequence than the principle involved in M. Broca's criticism—namely, that it is dangerous to speak dogmatically on scientific subjects with insufficient preparation. Aside from the error in regard to a question of pathology pointed out by M. Broca, it appears that Mr. Cripps has made the mistake of attributing the revival of suprapubic lithotomy to the work of Sir Henry Thompson. M. Broca says—what is perfectly true—that Sir Henry Thompson is but a recent convert to suprapubic lithotomy; and he does not say—what is equally true—that Sir Henry got the courage to practice suprapubic lithotomy, and learned the way to do it, from Guyon, of Paris. The conversion of Sir Henry Thompson to the practice of suprapubic lithotomy undoubtedly did more to convert the whole body of English surgeons than all that had happened for nearly fifteen years in America and on the continent of Europe; but this is not a fact especially creditable to their independence of authority or their acquaintance with what is going on outside of Great Britain.

There is a moral in all this, to be drawn by other writers and workers than those of England. The field of medical science is too large to be viewed exclusively from the standpoint of any one nationality, and those who wish to speak with authority on any subject in it should be careful that they do not overlook those who have made important contributions to it in other lands. If they make this mistake, they are sure to do injustice to those who have preceded them, and run the risk of falling into mortifying errors themselves.

AN EXPLANATION.

A few weeks ago we received a letter from a medical man in New Jersey who was displeased with a statement made by our correspondent in Cincinnati during the last meeting of the American Medical Association, and published in the REPORTER, May 12, 1888. The statement was, in effect, that the representative of New Jersey in the Nominating Committee did not vote or act in accordance with the instructions of his delegation in a certain matter. The letter referred to contained no denial of the allegation of our correspondent, and no justification of the conduct attributed to the writer; beside this, it was so unfortunately composed that—especially as there was no intimation that it was intended for publication—it seemed an act of kindness simply to acknowledge its receipt and file it away.

It is hard, however, to know what people want. In about a week more, a medical journal of this city published a copy of this very letter, with a sensational heading, and accompanied it with an editorial which showed an utter failure to appreciate the consideration we had shown for its author.

This is one of those things which sometimes provoke an editor; but we will not return railing for railing; our contemporary will, we trust, see that its criticism of the

REPORTER was due to a misapprehension, and be sorry for it.

We owe it to our Cincinnati correspondent, however, to say that he, as a news-gatherer, reported simply that a person, whom he indicated in such a way that only those whose business it was could know who was meant, had disobeyed the instructions of those whom he represented. The proper way to meet a charge of this sort is either to disprove it or to show that what had the appearance of wrong was, in fact, right. For either of these purposes the columns of the REPORTER are open to the person concerned. If our correspondent was misinformed, we will not hesitate to publish the fact; if his information was correct, but the circumstances justified the conduct of the delegate from New Jersey, we will let him show this in the REPORTER. But we cannot admit to our columns mere recriminations, or protestations as to the quantity of honor residing in small parts of any man's body. Finally, we would not have given so much space to this matter were it not that it concerns the American Medical Association and the profession in New Jersey quite as much as it does an individual to whom we by no means wish to do any injustice.

CORRESPONDENCE.

Anecdotes of Dr. Tuttle.

Dr. Socrates Tuttle, who settled in the town of Barnet, Vt., in the first part of the present century, and died there several years since, was full of fun and very fond of practical jokes. The following are told of him:

One day he met one of his neighbors who was always fishing and hunting without success, and withal very lazy; and he addressed him thus: "You seem to be a great hunter and a good marksman; now I have a patient who is very sick and is sure to die unless I can get an owl's gizzard to feed him; if you will get me one I will give you nine shillings for it." The hunter's knowledge in comparative anatomy was about equal to his success in hunting, so he started off early the next morning in pursuit of an owl, and although there was a pouring rain all day, he traversed the forests, impressed with the desire to save the life of the doctor's patient if possible. Just at dusk when it was so dark that he could scarcely see to take aim he discovered a small owl perched upon the limb of a tree, which he shot and carried home. The next day the doctor inquired if he had got that gizzard for his patient. The hunter replied: "I was out in the rain all day yesterday and just at dark shot an owl; I cut it open but *it hadn't a sign of a gizzard.*"

The doctor had two acquaintances in his beat, who had become impressed with the belief that when Roger's men were returning from Canada, being in a starving condition, they buried considerable gold and silver coin on the island near the mouth of the Passumpsic River. They talked with the doctor about securing this prize. He advised them to go in the night when nobody would be around to disturb them, and make but little noise while they were digging. He told them that, when they got within a few inches of the treasure, ghosts would make their appearance and try to frighten them away, but that they must pay but little attention to them unless they came too near when one of the party must read a passage from the Bible which would surely disperse all evil spirits. The doctor told them to go that night, and rolled up an old Latin lexicon, in place of a Bible, which they took along with them without opening it. About dark they started off in a small boat, and commenced to dig soon after reaching the island. The doctor arranged with three of his old chums to take a boat and land on the opposite side of the island, and walk over noiselessly where the diggers were at work dressed in sheets. The three ghosts got within a few feet of the money-diggers before being discovered, in the dim glimmer of their tin lantern. They were very much frightened and one of them unfolded the Bible and hunted for a passage but could find nothing that he could read, at the same time the ghosts were slowly approaching the spot, and in desperation improvised the following passage which he thought would be effectual: "In the name of this good book I command thee to depart." The ghosts approached a little nearer. The passage was repeated, but the ghosts continued to approach, slowly, without any change in their countenances. The passage was repeated the third time, and the ghosts still, slowly, continued to approach. By this time the money-diggers were so frightened that they threw their tools and lexicon

into the river, jumped into their boat, and paddled for the shore. The doctor's old lexicon came to pieces and some of the leaves were picked up on the shores of the Connecticut River as far south as Springfield, Mass. The money-diggers never heard the last of that expedition, and Dr. Tuttle never ceased telling the story as long as he lived.

JOHN M. CURRIER.

Newport, Vt.,
July 1, 1888.

Tait Versus Battey.

TO THE EDITOR.

Sir: I have just received a marked copy of THE MEDICAL AND SURGICAL REPORTER of June 2 which contains a paragraph headed Battey versus Tait, and I trust that in fairness you will allow me to state briefly the other side of the case.

Dr. Battey's attack is much to be regretted chiefly for the reason that if he were to spend half as much energy in fighting those who oppose the progress of abdominal surgery as he does in abusing those who are concerned for it, he would do more good in the world.

In the *Atlanta Medical Journal* for January, 1887, an attack on me by Dr. Battey, more or less similar to the present, appeared and was replied to by me. That reply contained a full statement of the facts, and those facts Dr. Battey entirely ignores.

Let me briefly re-state them, not as a reply to Dr. Battey, but as a method of clearing out some of the difficulties of this complicated question.

Dr. Battey says that he has sat too modestly in his chair and allowed me to talk about "my (Tait's) operation."

The absolute opposite of this is the fact. Whilst Dr. Battey has been shouting aloud for years that removal of normal ovaries should be called "Battey's operation," I have constantly urged that nothing should be called "Tait's operation." Let me call to witness numerous discussions on this side of the Atlantic, and the well-known discussions with Dr. Thalbow and Dr. Coe on your own side. Calling operations by people's names is a lazy habit, sure to breed confusion, and it has done so to a fearful extent in the present instance.

Operations should be named either on account of a leading principle involved or on account of some special, prominent, and distinctive detail. The removal of ovaries "with the theory that the cure would depend upon bringing about change of life by the removal of the ovaries" was a proceeding which seemed to Dr. Marion Sims to have an intelligent and leading principle. But Dr Sims was burdened with the notion, now abolished, that ovulation was the cause of menstruation, and therefore his wonderful enthusiasm overcame his feebler judgment, and he rushed the proceeding into popularity as "Battey's operation." Without Dr. Sims's pamphlet the theory never would have been heard of, and it is a thousand pities he ever wrote about it. His charming inconsistency alone proves this, for we find him saying that "the experience of all ovariotomists proves conclusively that the removal of one ovary will not do this" (bring about the change of life), and yet we find Dr. Battey ignoring his theory at the very outset, and removing but one ovary in the second case in which he operated; and he did the same thing in his fourth and fifth cases. We see here, therefore, that Battey had really no principle at all to go upon in his experiments, and that Sims was wholly inconsistent in his conceptions of them.

The result of it was that all over the world "Battey's operation" was recognized as what he himself called it, "normal ovariotomy," and "normal ovaries" were whipped out in this country, I know, and I think also in America, by the bushel, heedlessly and only because Marion Sims had praised "Battey's operation." In your columns Dr. Battey repeats all this by saying that he "operates for the change of life." I say again that I have operated on this principle only six times, that all my cases made easy recoveries, but that the ultimate results have proved so unsatisfactory that I entirely condemn "Battey's operation."

I confine my operations to cases where there is actual, physical, and tangible disease in the uterine appendages, and I object to any operation being named after me, because that style of nomenclature involves neither leading principle nor essential detail.

Dr. Battey says that I said nothing about this till 1879. This is not true, as my first publication on the principle was in 1873. My first case was operated upon on February 11, 1872. Dr. Battey says Mr. Tait found it necessary to resurrect a patient at the Congress in 1881 who was recorded dead years before "in his own handwriting." This is not true at all. The death was not recorded by me at all, but the records of two patients were confused, and not the patient resurrected, but the proper detail of the

operation correctly supplied. All this was explained and proved to Dr. Battey before witnesses and by the patient herself, in August, 1881, in my own house, and if Dr. Battey had any skepticism on the subject it was then and there he ought to have displayed it, and not in your columns seven years later. Dr. Battey prays that he may be prevented falling into my ways, but the style and direction of the prayer reminds me of the incident when two men went up into the temple to pray, and the one who prayed was a Pharisee.

Yours, etc., LAWSON TAIT.

Chlorate of Potash Poisoning.

TO THE EDITOR.

Sir: Please let me know through the REPORTER what is to be done in chlorate of potash poisoning, if an over-dose has been given, and oblige

Yours truly, SUBSCRIBER.

July 11, 1888.

[As most of the reported cases of chlorate of potash poisoning give evidence of acute gastro-enteritis with nephritis, a rational treatment would be that appropriate for poisoning with any irritant — demulcent drinks and the like—combined with measures suitable for the congestion or inflammation of the kidneys—dry cupping over the loins, etc. If collapse is threatening, alcoholic and diffusible stimulants are, of course, to be employed.

There is no antidote and no specific treatment. EDITOR OF THE REPORTER.]

NOTES AND COMMENTS.

Purpura Rheumatica.

Dr. Wm. Osler says in the *Canada Med. and Surg. Journal*, June, 1888: "There are certain disputed points in the clinical history of purpura rheumatica (the peliosis rheumatica of Schönlein) which are illustrated by the following case: A. B., thirty years old, seen with Dr. J. H. Musser. He had been a tolerably healthy man. In March, he had a severe sore throat, which kept him at home for a couple of weeks. He returned to work, but in ten or twelve days the sore throat again came on, with fever and swelling of the left ankle. I saw him on the fourteenth day of the illness. The symptoms had been fever of moderate grade; arthritis, chiefly of right ankle, but other joints were also sore and stiff; an extensive purpuric and urticarial eruption, beginning on lip and eyelid and extending to limbs, chiefly on extensor surfaces; great swelling and finally sloughing of uvula; profuse sweats, and endo-pericarditis. At the time of my visit, the purpura was fading, but the rash was still most extensive on the legs, and was both petechial and presented the characters of purpura urticans. A considerable portion of the uvula had sloughed away, and the fauces had a deep bluish-red color. The heart-beat was outside the nipple-line; there was pericardial friction, and a systolic murmur could be heard at the apex.

"The question arose whether we had not a case of malignant endocarditis, with the extensive cutaneous infarcts so common in this disease; but the large size of the hemorrhagic spots, their swollen condition, and the fact that some of them began like 'hives,' pointed to a purpura urticans associated with articular and cardiac disease in a case of rheumatism. The joint-affection, profuse sweats, and endo-pericarditis indicate the true rheumatic nature of cases of this kind. The sore throat, so marked a feature, existed also in a remarkable case of peliosis rheumatica which I saw with Dr. Molson in 1880, and which is recorded in Vol. IX of this journal. The patient had three attacks of tonsilitis within five weeks. Sloughing of the uvula, such as occurred in Dr. Musser's patient, is occasionally met with in acute rheumatism: I recorded an instance in Vol. VII of the journal. And lastly, the existence of endo-pericarditis is worthy of note, as certain authors have laid stress on the fact that it does not occur in rheumatic purpura."

Poisonous Canned Food.

Dr. Geo. Hay, in a communication to the *Pittsburgh Med. Review*, June, 1888, says that on several occasions, during the past four or five years, he has observed that, after eating about four ounces of canned lobster or canned salmon, he has been attacked with very marked symptoms of acute saturnine poisoning. He therefore resolved to investigate, and in doing so noticed that, on the inside, the cans were generally much eroded. On the outside, they are covered with a label and also with a yellow varnish, whose main purpose, he says, seems to be to conceal the natural color of the so-called tin plate. Having removed the varnish by an appropriate solvent, he carefully scraped a quantity of the metal from the surface of the tin plate, at the same time cautiously avoiding contact of the steel scraper with the solder. Two samples obtained in this manner, one

from a lobster-can and the other from a salmon-can, were carefully analyzed. The following is the mean of the two closely agreeing analyses expressed in percentages:

Tin	13.76
Lead	61.92
Iron (with traces of other metals)	24.32

The greater portion of this iron, he says, was doubtless taken up from the iron plate upon which the more fusible alloy was superimposed. A small portion of the iron was probably an impurity in the original alloy. Looking at the above figures, it will be seen that the original alloy consisted of about one-fifth tin and four-fifths lead. Commercial block tin ought to contain about 99 per cent. tin, and is the material with which the tin plates ought to be coated. To put food, which is intended to be eaten, in wrappers of lead, he declares to be simply villainous, and urges that the scoundrels who do so ought to be punished. Chemistry, in his opinion, is rapidly becoming a low art, prostituted to the still lower art of money-grabbing.

Quarantine at San Francisco.

The *Pacific Medical and Surgical Journal*, June, 1888, says: "San Francisco claims a population of more than 300,000, and boasts of being the leading city of the Pacific Coast of America. Its quarantine establishment consists of a steam tug-boat and one medical officer, now temporarily supplemented by an assistant, for whose compensation there is no legal provision. No apparatus for disinfection nor accommodation for people under detention has been provided, for the law-making powers have furnished no means. In their absence, the steamship companies employ hired vessels anchored in the bay, where these persons, sometimes numbering hundreds, are maintained at heavy expense, estimated at about $150,000 for the months of February, March, and April. This is a single step in advance of the Turkish method of detaining ship, crew, passengers, and cargo, for an arbitrary period. Fumigation has been practiced here, in a primitive fashion, but the principal element is specific detention for the maximum period of incubation, and the rule has been extended to white passengers and pock-marked Chinese, in common with the rest; justification being found in the discovery of two well-marked secondary cases of small-pox among the coolies. Vaccination has not been practiced at quarantine during the present season, until within the last month; and indeed this would be a poor reliance with such results as have lately been obtained at the Health Office among the inhabitants of the city."

Poisoning with Gelsemium.

A case of poisoning with a preparation of gelsemium sempervirens took place recently, in Toronto, Canada. A prescription containing quinine and fluid extract of gelsemium was dispensed for a woman suffering with neuralgia, the directions being that a teaspoonful of the medicine should be taken three times a day. The remedy did not prove effectual, and the patient took it upon herself to administer six teaspoonfuls at once, with the effect of producing symptoms of acute poisoning. Medical aid was summoned, and, by liberal treatment with tincture of nux vomica, a fatal result was averted. —*Canadian Phar. Journal*, July, 1888.

Sudden Death from Fear.

It is well known, says the *Wiener med. Presse*, May 27, 1888, that profound mental impressions are capable of producing, not only transient and lasting disturbances of the central nervous system, but even now and then sudden death. In the *Münchener med. Wochenschrift*, No. 20, Bollinger reports a case of sudden death from fear in a prisoner. It seems that a farm-laborer, sixty years old, in a fit of anger struck another man on the head with a pitch-fork, inflicting two wounds involving the skull. The injured man died of pyæmia. His assailant was imprisoned, and became extremely depressed and melancholy. On January 30 he did not seem to be quite well, but first complained of illness on the next day, when he had to appear before the jury as defendant. Here he became so miserable that he had to be carried away, and had the appearance of a man moribund. The skin was cold; there was no pulse, but repeated attacks of fainting. He was taken to the hospital, where he died in twenty-four hours. At the autopsy, his organs corresponded with the relatively good state of health which he had enjoyed before the occurrence just described, and no such changes were found, especially in the brain and heart, as could be charged as contributory to the direct cause of death.

Subsidence of Doubtful Tumors.

Dr. David W. Cheever, Professor of Surgery in the Harvard Medical School, in a paper read before the Suffolk District Medical Society, April 4, 1888, says that cases

of tumor are frequent in which an operation is not indicated, either on account of poor health, of age, or of the extent of the disease. He reports eleven cases in which tumors of a doubtful character subsided under the use of alterative medicines. The alteratives employed were iodide of potash, iodide of iron, bromide of potash, and occasionally mercury in some form, and arsenic.

In conclusion, he says that in the course of his practice he has once seen a case in which no arsenic could be tolerated, and twice cases in which the iodides could not be borne. He has had no success with Chian turpentine, but is now trying chloride of lime (an old remedy) for glandular enlargements.—*Boston Med. and Surg. Journal*, June 21, 1888.

Treatment of Ozæna with Naphthol.

At the recent congress of the French Society of Laryngology, Dr. Ruault recommended the treatment of ozæna with naphthol. He washes out the nasal cavities three or four times a day with a solution made by dissolving in a quart of water a teaspoonful of a solution of equal parts of borax and bicarbonate of soda, and a coffeespoonful of a solution of

Naphthol β	ʒ iii
Alcohol (90 per cent.)	f ʒ iiss

In very obstinate cases, the cavities are washed out, and then tamponed for fifteen minutes with cotton saturated in:

Naphthol β	ʒ iii
Tincture of quillaia	f ʒ iii
Distilled water	f ʒ xiii

The advantages of this treatment are a rapid disappearance of the odor, and a marked diminution of the secretion. The only objection to the naphthol is that, immediately after its employment, slight burning occurs, which very soon subsides.—*Wiener med. Presse*, June 17, 1888.

Glycerine Suppositories for Constipation.

The employment of injections of glycerine as purgatives is objectionable in persons with hemorrhoids or in those with irritable mucous membrane of the rectum which bleeds easily. When these conditions are present, the nozzle of the syringe has to be manipulated with great care. Boas has recommended (*Deutsche med. Wochenschrift*), as a substitute for the injections, suppositories of glycerine. He uses those made by Sauter, the largest of which contain one gramme of pure glycerine. These suppositories keep their shape and activity after being kept a week. Fifteen or twenty minutes after being inserted, there is an active call to stool, but it is unattended with tenesmus or other difficulty, and, as a rule, is quickly followed by an evacuation.—*Wiener med. Presse*, June 17, 1888.

Anthropometry.

At the Anthropological Institute of London, April 24, some interesting figures were, according to the *Lancet*, May 5, 1888, given in regard to the head-growth of Cambridge students. It seems that during the recent health-exhibition at South Kensington over nine thousand persons were measured in Mr. Galton's laboratory, and a comparison of these measurements with those of the Cambridge men gives a result strongly in favor of the latter, as the following table clearly shows:

	Height.	Weight.	Breathing capacity.	Pull.	Squeeze.
Cambridge,	68.9	153.6	254	83	87.5
S. Kensington,	67.9	143.0	219	74	85.0

These figures point to the high physical condition of the upper educated classes, and a comparison of these figures with those derived from the statistics collected by the anthropometric committee of the British Association shows that the average Cambridge student is distinctly above, and the average visitor to the exhibition about as much below, the mean of the general population in these particulars. The comparative brain-capacity was calculated by multiplying together the maximum length, maximum breadth, and height above a plane passing through the meatus auditorius and immediately beneath the superciliary ridge. The men were divided into three classes: A, first-class honors men; B, all other honors men; C, "poll" men and failures. It was shown that the heads in class A were distinctly larger than those in class B, and that while both gradually increased in size from the age of nineteen to twenty-five, the superiority was steadily maintained. In the case of class C, which started with a smaller head than either A or B, the size increased with much greater rapidity than in either of the other classes up to the age of twenty-two and a half, when the curve was found to cross that of class B; and at the age of twenty-five the size of the head of the average "poll" man, although considerably less than that of the "first-class" man, was slightly larger than that of the ordinary honors man.

Recent Mortality in New York.

The New York *Herald*, July 18, says: "The Sanitary Bureau reports that, for the week ending June 30, there were 1038 deaths registered in its office. This represents an annual death-rate of 35.37 per 1000 on an estimated population of 1,525,981. This is by far the greatest mortality in any one week reported up to that date during the present year. The total number of deaths from January 1 to June 23 was 18,684, and the weekly average was about 778, or 259 less than in the week ending June 30.

"This extra mortality of 259 in the last week of June probably represents the morbific effect of the hot summer weather, most fatal in cases of sunstroke, cholera infantum, and other enteric diseases. It is, perhaps, the most striking and conclusive demonstration that can be had of the necessity at this time for thorough sanitation of household premises and of great prudence in the care of the young. Though there has been an abnormal abatement of the deadly heat this month, its return with the dog-days will be more severely felt by contrast with the recent cool spell."

Gonorrhœal Ophthalmia.

At the meeting of the British Gynecological Society, June 13, 1888, Dr. Burnie read a note on gonorrhœal ophthalmia. Referring to his observations at the last meeting, he wished it to be understood that he looked upon gonorrhœal ophthalmia and purulent ophthalmia of infants as two distinct affections. The former occurred only in subjects suffering with gonorrhœa, never in second parties. It had never, in the experience of Dr. Burnie, affected both eyes, but might do so. It was not caused, in his opinion, by direct contagion, or else it would be much more frequent, but was due to metastasis, similar to gonorrhœal synovitis. The appearance of the eye was also different from that presented by eyes in which direct infection had taken place by means of towels, etc., as Dr. Burnie had repeatedly seen. The semi-ptosed condition of the eyelid was especially characteristic. In purulent ophthalmia of infants, the disease usually attacked both eyes, and was caused by direct infection.

Dr. Bell agreed very much with what Dr. Burnie said about gonorrhœal ophthalmia as distinct from purulent ophthalmia. He thought the former might be caused without direct infection, but that it might also be caused by direct infection. Diseases of metastatic nature in the eye were well known, such as iritis.

Dr. Woods remarked that he had never seen a case of gonorrhœal ophthalmia or rheumatism among soldiers, while he had seen several cases among officers. He thought this was against the view of direct infection and in favor of the metastatic nature, as direct infection would be more likely to take place among patients of a lower class.

Dr. Hime could not concur in Dr. Woods's conclusions. He thought direct infection was caused by want of care and cleanliness, both of which were exercised in the cases of soldiers much more than in the cases that came under observation in the ordinary hospitals. Experiments had proved that urethritis could be inoculated from gonorrhœal ophthalmia, but not from synovitis, and he thought gonorrhœal synovitis might often be identical with ordinary synovitis from other causes.—*Medical Press and Circular*, June 23, 1888.

Southern Surgical and Gynecological Association.

The meeting of the Southern Surgical and Gynecological Association will be held September 11, 12, and 13, 1888, at Birmingham, Alabama. A number of interesting papers have been promised by the leading surgeons and gynecologists of the South. The programme will be announced later. Dr. W. E. B. Davis, of Birmingham, is Secretary of the Association.

NEWS.

—Dr. H. L. Burritt, of Bridgeport, Conn., died July 11. He was graduated from Yale in 1844.

—Dr. Emil Grunmach, of the University of Berlin, has been granted the title of Professor.

—Dr. Valerian Tashkevich, Professor of Clinical Therapeutics in the University of Kharkoff, is dead.

—Dr. Fürbringer, of Amsterdam, has been chosen Professor of Anatomy in the University of Jena.

—Seventeen deaths from yellow fever are reported from Havana, Cuba, for the week ending July 7, 1888.

—Professor Virchow has been awarded the Boerhaave Medal for Anthropology by the Haarlem Scientific Society.

—Small-pox has made its appearance in the Polish quarter of Buffalo, N. Y. Eight cases were reported up to July 17.

—Dr. Robert D. Weeks died at his residence in Philadelphia, July 18.

—The American Gynecological Society will meet in Washington, September 17 to 19, instead of in Boston, as at first intended.

—Mr. Arthur Hare, principal assistant to Professor Chiene, of Edinburgh, has been appointed Professor of Surgery in Owens College, Manchester.

—A sanitary inspection of the public school-houses of Philadelphia is now in progress. A number of serious defects in drainage have been reported.

—A family, consisting of nine persons, was poisoned in Philadelphia, July 15. The source of the poison is supposed to be in some canned tomatoes. All have recovered.

—Professor Adamkiewicz has been promised increased clinical facilities in the University of Cracow, and, in consideration of this, has been induced to withhold his resignation.

—It is stated that some silly Parisian mothers have aroused the just indignation of the medical profession by painting the faces of their children, and dyeing their eyebrows.

—Dr. Bass Rawson, of Findlay, Ohio, who celebrated the 89th anniversary of his birth July 14, is one of three brothers, all practicing doctors. The oldest is 92 years old, and the youngest 84.

—At the commencement exercises of Union College, New York, June, 1888, the honorary degree of LL.D. was conferred upon Mr. Lawson Tait, F.R.C.S., Professor of Gynecology in Queen's College, Birmingham, England.

—The following cases of, and deaths from, infectious diseases were reported in New York City for the week ending July 17: Typhoid fever, 40 cases and 12 deaths; scarlet fever, 460 cases and 93 deaths; cerebro-spinal meningitis, 21 cases and 16 deaths; measles, 898 cases and 84 deaths; diphtheria, 481 cases and 147 deaths; small-pox, 13 cases and 2 deaths.

—The medical officer in charge of the Marine-Hospital Service at Ship Island Quarantine Station, Mississippi, reports that the captain and four men died of yellow fever on the Norwegian bark "Magnolia," on the voyage from Rio Janeiro. The vessel was bound for Pensacola, Fla., and is now undergoing quarantine at Ship Island, having been sent to that station by the Pensacola health authorities.

HUMOR.

HE—"I SEE THAT OLD MR. BENTLY was buried yesterday." Wife (shocked)—"Why, is old Mr. Bently dead?" He (who has just been "sat upon")—"The paper doesn't say whether he is dead or not; simply that he was buried yesterday."—*Life.*

THUNDER AND LIGHTNING.—Lightning-rod agent (to boy)—"Is that your father lying there in the shade, sonny?" Boy—"No, sir; pa's away, an' me and ma is the only ones to home; that's a dead book-agent. D'ye want to sell ma anything?" "Thunder, no," said the lightning man.—*The Epoch.*

"I HAD MY PICTURE TAKEN to-day," said little Christine. "I crossed my arms and leaned on a chair, and the picture-man put my head in some tongs." "Why, you must have looked like a lump of sugar in sugar-tongs," laughed papa. "Why, so I must have," said Christine, delightfully, "'cause the man kept saying: 'What a sweet little girl.'"—*Religious Record.*

JOHNNY WAS ANXIOUS.—"Won't we get any dinner to-day, ma?" asked little Johnny McSwilligen, rather anxiously, as the congregation sang the closing hymn at the morning service last Sunday. "Of course we will, Johnny," whispered his mamma. "What put that question into your head?" "Why, everybody's singing 'We're going home, to dine no more.'"—*Pittsburg Chronicle-Telegraph.*

OBITUARY.

HORTENSIUS W. PURNELL, M.D.

We regret to learn that Dr. H. W. Purnell, an old subscriber to the REPORTER, died July 3, 1888, at Hot Springs, Arkansas. He was born June 17, 1838, in Green County, Alabama. Dr. Purnell had been in ill health for some time, but none of his friends anticipated an early death. He abandoned his practice only a short time ago and went to the Springs. He was a graduate of the University of Louisiana, and for a number of years a resident student of the Charity Hospital in New Orleans. On the breaking out of the war, he joined the medical department of the army on the Confederate side, and (except for two months, while stationed in the hospitals at Holly Springs, Miss., until the evacuation of Corinth, after the Shiloh battle) was in the field medical service until the close of the war. In 1865 he moved to Memphis, and has since been constantly in practice.